FIRE ENGINEERING

The Journal of the Fire Protection Profession Since 1877

OCTOBER, 1951

OHIO STATE UNIVERSITY
OCT 25 1951
LIBRARY

Gas Blasts Wreck Many Homes in Brighton, N. Y. (Article in this Issue)

A GAGE-BABCOCK PUBLICATION

For FIRST AID *in breathing emergencies*

INhalation

EXhalation

Write for free bulletin on the Emerson Method of Artificial Respiration

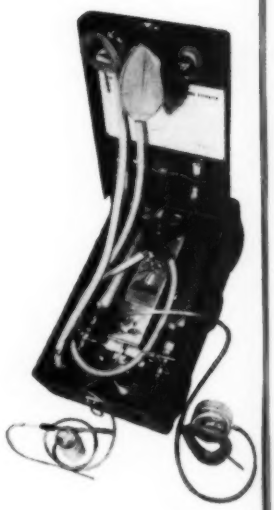
For SECOND AID

EMERSON Resuscitators

SIMPLE to operate.

SAFE for adults, children, or infants. No instance of injury ever reported, in thousands of cases. Accepted by the American Medical Association since 1942 for use *by laymen*.

PROVIDE SUCTION, alternating with pressure, to give vital aid to the circulation. Suction and pressure are mild yet effective—and not adjustable. Write for free Medical References on Resuscitation.



J. H. EMERSON COMPANY

32 COTTAGE PARK AVENUE, CAMBRIDGE 40, MASSACHUSETTS

Plan your air-raid warning system now!

Remember these basic facts:

Horsepower is no true measure of sound output

Decibel output is no true measure of effective sound distribution

A successful air raid system is not that which has the most powerful warning device nor yet the one which produces the greatest decibel output at 100 feet or other specific distance.

The effective air raid system is one which blankets every area completely with ample and unmistakable penetrating sound waves.

Centrally located large signals simply cannot do this because buildings, trees, hills, and other obstacles block off, deflect, or reflect the sound waves. Wind, humidity, altitude and temperature all conspire to alter the distribution of sound.

"Super" signals may produce 100 times the volume of a small signal. By simple arithmetic it should cover 100 times the area. The truth is that sound distribution functions by higher mathematics, not arithmetic. Simple arithmetic doesn't take into consideration the obstacles to sound travel encountered in congested municipalities where air raid sirens are needed and used.

The more congested the area, the more signal devices required to blanket it, regardless of size. Ponderous, oversize devices cost infinitely more for blanket coverage per square mile than smaller signals. In extremely congested areas, it takes almost as many "whooper-doopers" to assure blanket coverage as it would smaller sirens.

Dollar for dollar, 2, 5, or 7½ horsepower sirens will do the job better and more dependably. Cities which used the giant models in World War II have turned to smaller sirens in this emergency. Philadelphia, Newark, New Orleans, Hartford, Providence, El Paso, and Buffalo have had or are now installing the finest air raid systems. Draw on their wisdom and experience. We will be glad to give you honest and sincere assistance with your air raid signal problem. Write us and ask for Bulletin No. 95.

DANGER—

will you be ready?

FEDERAL ENTERPRISES, INC.

FORMERLY: FEDERAL ELECTRIC COMPANY, INC.

8702 SO. STATE STREET • CHICAGO 19, ILLINOIS

FIRE ENGINEERING

A Consolidation of FIRE AND WATER ENGINEERING, THE FIRE ENGINEER, FIRE PROTECTION *and* FIRE SERVICE

CONTENTS

Vol. 104 October, 1951 No. 10

	Page
With the Editor By Fred Shepperd	821
Mutual Aid Proves Effective at Binghamton Armory Fire A Staff Report	822
London Fire Brigade Makes Effective Use of Radio By Paul C. Ditzel	824
Fire Service Ladders and Their Use—Part XVII By Roi B. Woolley	827
Wire and Cable Plant Boast Efficient Fire Department By Dan Rice	830
Bridgeport Hospital Trains Employees in Fire Prevention By Tom Magner	833
News of the Manufacturers	837
Short Cuts and Gadgets	838
False Alarms	840
Persons in the News	846
Obituaries	850
The Watch Desk By Roi B. Woolley	854
The Round Table Civil Defense Programs of Fire Departments	856
World-Wide Fire News By Roi B. Woolley	860
What's Burning?	866
Questions and Answers	869
Among the Buffs	873

FRED SHEPPERD
Editor

ROI B. WOOLLEY
Assistant Editor

Nothing is Permanent But Change!

We are living in a world remade—and being remade. The gulf between *today* and *yesterday* is an abyss that staggers memory. Never before did the words *"last year," "five years ago"* and the *"good old days"* express so much of the obsolete as now! We think in new terms, thrill to new emotions, respond to new appeals.

● While somebody is saying about a thing *"It can't be done!"*—some "fool" is *doing it!*

● That applies in the vast business of fire protection and control, as well as other fields. To meet the challenge of change . . . to be prepared to do the things tomorrow that people say today can't be done in fighting fire—and preventing it . . . to bridge that gap between yesterday and today—and tomorrow, keeps students of the fire service ever on the alert. Only by being prepared, by being forearmed with knowledge, can today's and tomorrow's fire fighters meet, greet—and beat the peculiar and particular problems of this kaleidoscopic age in which we live.

● FIRE ENGINEERING is proving a pretty sound plank by which to bridge gaps, when it comes to being prepared for eventualities.

● More members of the fire service rely upon FIRE ENGINEERING'S editorial and advertising pages than ever before!

The Publishers

FIRE ENGINEERING

The Journal of the Fire Profession since 1877; published on the fifteenth of each month by Case-Shepperd-Mann Publishing Corp., 24 West 40th St., New York 18, N. Y., also publishers of *Water Works Engineering, Wastes Engineering*, etc. ¶Subscription price: U. S., Latin America and Canada, $3.50 a year; Foreign, $4.50; Single copies, 40c. ¶Member of Audit Bureau of Circulations and Associated Business Publications, Inc. ¶Entered as second class matter April 15, 1929, at the Post Office at New York, N. Y., under Act of March 5, 1879.

¶Contents of this issue copyrighted, 1951, by Case-Shepperd-Mann Publishing Corp.

President and Advertising Director, KARL M. MANN; Vice-President and General Manager, I. HERBERT CASE; Secretary and Editorial Director, FRED SHEPPERD; Assistant Advertising Director, WALTER H. FREDRICKS; Eastern Representatives, WILLIAM J. GIBSON, ALFRED J. HOUGHTON; Circulation Manager, W. H. TOPHAM. CHICAGO OFFICE: W. S. CLEVENGER and L. M. ROCHE, 8 So. Dearborn St., Chicago 3, Ill.; SAN FRANCISCO: CHARLES H. WOOLLEY, 605 Market Street, San Francisco 5, Calif.; LOS ANGELES: AUGUST HAURIN, 6000 Miramonte Blvd., Los Angeles 1, Calif. ¶Printed in U.S.A.

A CASE-SHEPPERD-MANN PUBLICATION
"Specialized Leadership"

FABRIC

FREE FOLDING

FABRIC FIRE HOSE

BALANCED DIAGONAL TWILL WOVEN GENUINE WAX AND PARA GUM IMPREGNATED CABLE CONSTRUCTED COTTON RUBBER LINED MUNICIPAL FIRE HOSE MADE BY THE ONLY EXCLUSIVE MANUFACTURER OF FIRE HOSE IN AMERICA

FABRIC FIRE HOSE CO.

1869 SANDY HOOK, CONN. 1951

It will help if you mention FIRE ENGINEERING *when writing advertisers*

MARS

RADIAL BEAM

Signal Light

MODEL RB

REVOLVING SIGNAL LIGHT PROVIDING 360° PROTECTION

A dash switch provides two operating positions. In the first operating position the beam is projected only forward of the vehicle, thus eliminating the necessity of installing a shield behind the light to block off the rear beam. If it is desired to have 360° protection the second operating position will project the beam in a complete circular path about the vehicle.

Mechanically and electrically the MARS RADIAL BEAM Signal Light is simple. Sealed beam lamps can be readily replaced without disturbing the waterproof seal between the housing and the vehicle roof. Motor brushes are easily replaced without dismantling the motor.

ALL LIGHTS are GUARANTEED for 5 YEARS by MARS, Manufacturers of the FINEST in SIGNAL DEVICES

MARS SIGNAL LIGHT CO.

4322 W. CHICAGO AVE., CHICAGO 51, ILL.

Kindly mention FIRE ENGINEERING *when writing advertisers*

RESEARCH KEEPS **B.F.Goodrich** FIRST IN RUBBER

This is the wrong place for a shower bath

B. F. Goodrich Fire King hose is 50% stronger, 12% lighter

YOU reduce the threat of hose failures when you outfit your equipment with B. F. Goodrich Fire King hose.

For years engineers have been searching for a stronger, lighter fire hose cord. A new chemically-produced fiber has now been designed — especially for fire hose. Not affected in any way by moisture, mildew, mild acids or alkalies. Used in new Fire King hose as the cords that go *around* the hose and carry the load under pressure.

Stands higher pressures—In actual laboratory tests, Fire King hose — with the new cord — was found to be 50% stronger than standard hose. Every length of Fire King fire hose is tested to 600 pounds pressure.

Lighter, more flexible—Fire King cord is lighter, more flexible than ordinary fire hose cord, making hose easier to handle and coil in a small diameter. New Fire King hose is 12 to 15% lighter than standard fire hose which is tested to only *400 pounds pressure.*

End protection—Fire King (2½" size only) has the exclusive patented B. F. Goodrich end protection — an extra ply of hard woven cords extending 12" from the coupling. Adds 100% more strength to coupling area. Not one single length of B. F. Goodrich fire hose with end protection has ever failed in the coupling area.

Fire King combines all the features of the highest grade B. F. Goodrich fire hose with a brand new feature — Fire King reinforcing cord. The result is a premium fire hose 50% stronger, 12 to 15% lighter, yet only slightly higher in cost.

Departments looking for ways to lower hose costs by getting hose that lasts longer should write for the name of nearest BFG Fire Hose Distributor. *The B.F.Goodrich Company, Industrial & General Products Division, Akron, Ohio.*

Fire Hose
BY
B.F.Goodrich

"Amazing performance!"

—says Bay City Fire Chief

Bay City does it again . . . makes second remarkable stop of the summer with John Bean Fog Fire Fighter

CHIEF TRUDELL inspects charred timbers in the attic of the depot, indicating deep-seated nature of fire.

CREW OF THE Bay City Bean High-Pressure Fog Unit (left to right), Gene McLellan, Capt. Martin Kaiden, Chief Trudell, Freeman Plessner, Clifford Goddard.

TWICE in four months, Fire Chief Joseph L. Trudell and Bay City firemen had reason to be "amazed" at the fast action and efficiency of their John Bean High-Pressure Unit.

In April, a major fire at the Electric Auto-Lite plant was knocked down in "a matter of seconds" with Bean High-Pressure Fog.

On August 17, firemen, led by Assistant Fire Chief Jacob H. Hohmann, Jr., were called to fight a deep-seated 2-alarm fire, started by youthful prowlers in an unused Chesapeake & Ohio depot. Roaring flames filled the open attic of the rambling 15,000-sq.-ft. structure when the Bean High-Pressure Unit reached the scene. Two high-pressure fog lines, *using water from the Unit's own supply,* attacked the blaze through a second-story window. By the time supporting pumper units had water in their lines, the high-pressure fog had the fire out.

Less than 300 gallons of water were used and no water damage was found in the building. Total damage to the building was less than $6,000.

Yes, an "amazing performance," but performance *you* too can have with modern John Bean High-Pressure Fog. Write today for information.

Sensational John Bean Features!

- Goes into action immediately because it carries own water supply
- Clears the way for close-up, inside work with protective screen of flame-smothering high-pressure fog
- Puts fires out faster because Bean High-Pressure Fog outperforms solid streams 10 to 1
- Practically eliminates water damage by extinguishing fires quickly and efficiently

BAY CITY, Michigan, High-Pressure Unit carries two guns of 30-g.p.m. each, 850 pounds pump pressure. Delivered complete with all accessories.

BEAN *Original* HIGH-PRESSURE FOG FIRE FIGHTER

CAN BE MOUNTED ON MOST STANDARD TRUCK CHASSIS

FOOD MACHINERY AND CHEMICAL CORPORATION

JOHN BEAN DIVISION, DEPT. 126, LANSING 4, MICH. • JOHN BEAN DIVISION (WESTERN), 409 JULIAN ST., SAN JOSE, CALIF.

BUILDERS OF BEAN HIGH-PRESSURE PUMPS FOR OVER 60 YEARS

NEW **Fyr-Fyter's**
DRY CHEMICAL
Extinguisher

- **More Thrust—Greater Reach**
- **Lightweight—Easy to Maneuver**
- **Squeeze-Grip Nozzle Control**
- **Complete Discharge of Contents**

With this new Dry Chemical unit, FYR-FYTER rounds out the most complete line of portable fire extinguishers in the industry! Carefully engineered for killing B and C fires fast, it is made of lightweight Stainless Steel, is extra easy to handle. Yet it can take more knocks, more bumps, more rugged use in fighting fire. The fine-powder, heat-shield stream has longer reach, greater distribution. New design eliminates clogging at elbow and in discharge hose. Specially effective on liquid gases, and on burning gas piped under pressure. Remember the formula: any operator . . . plus this new Dry Chemical Extinguisher . . . equals greater control of B and C fires!

Write for Complete Information!

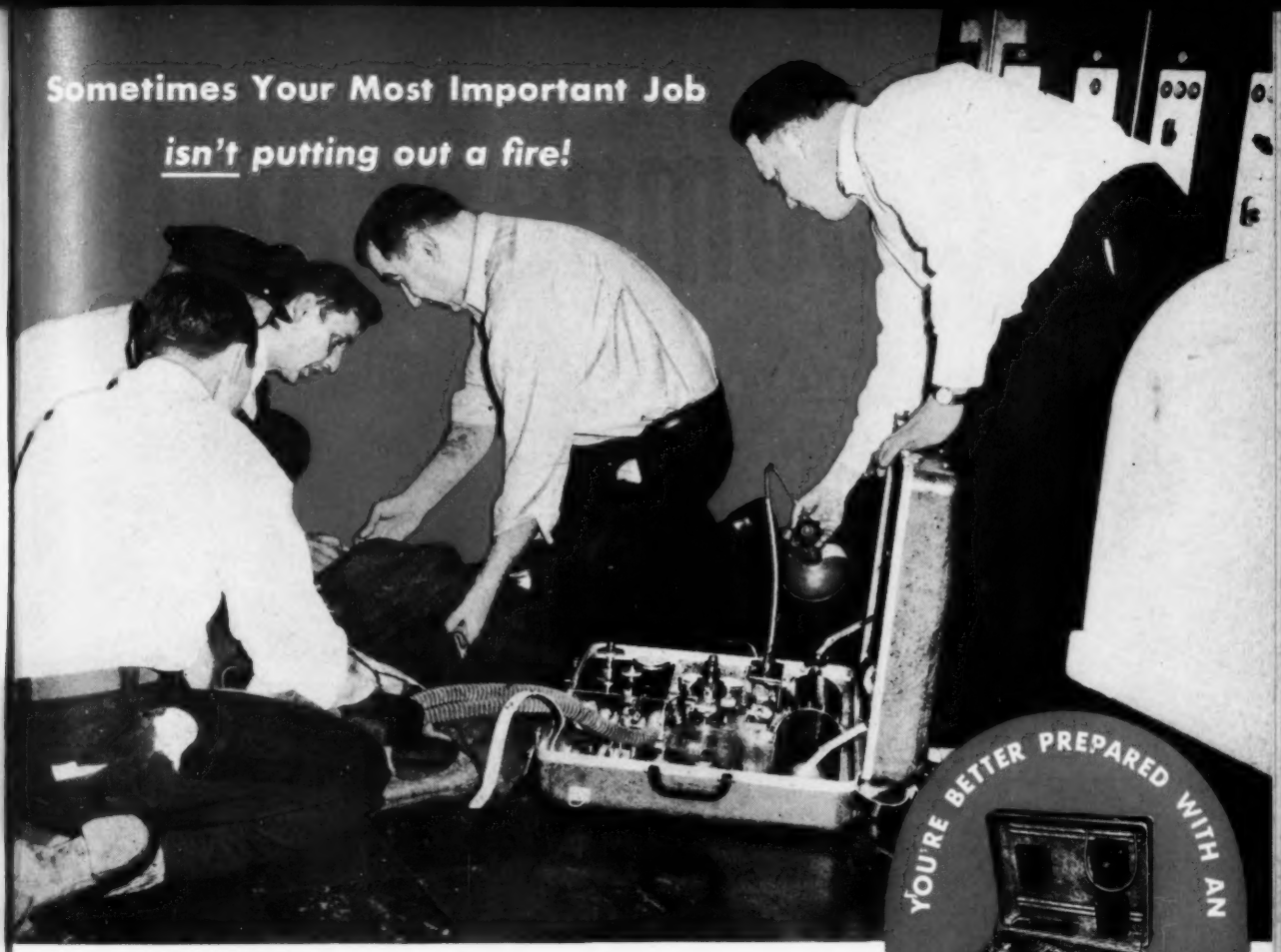
The Fyr-Fyter Co.
(FIRE) (FIGHTERS)
221 CRANE, DAYTON 1, OHIO

725,000 gallons of water were pumped on this inferno, but the blaze continued for more than 12 hours . . . until 43 firemen were in hospitals and more than 1/2 million dollars had gone up in smoke. No one in Dayton, Ohio, expected such a fire, but, fortunately, there was plenty of Republic Fire Hose on the job and alert fire crews were able to keep the holocaust from spreading. Republic Fire Hose is carefully constructed of the finest materials, which are specially treated to resist deterioration. Even after long periods of inactivity, Republic Fire Hose is ready for action with maximum fire-fighting strength. Be prepared. Talk to your local Republic Distributor now about reliable Republic Fire Hose or write direct.

Pioneers in the use of **COLD RUBBER**

INDUSTRIAL RUBBER PRODUCTS BY
REPUBLIC RUBBER DIVISION
Lee Rubber & Tire Corporation
YOUNGSTOWN, OHIO

Please mention FIRE ENGINEERING *when writing advertisers*



There's a little boy laughing and playing around his Cleveland home today because of an unusual life-saving team of a truck driver—two quick-thinking patrolmen—the Shaker Heights fire department rescue squad—and an M.S.A. Pneolator.

This three-year-old, playing on the bank of a creek, slipped and fell in, striking his head on a rock. Unable to get up, he lay submerged while the icy water drained away his life and strength. A truck driver pulled him out, and called a radio patrol car. During the rush to the hospital, the boy lost consciousness, and his body stiffened. It seemed that the end of the story would be written by "D.O.A."

Then the two patrolmen made a decision that was credited with saving the boy's life. They knew of a new piece of life-saving equipment at the fire station, and speeded there. Captain Stanley Nethery, Lieutenant Ronald Kral and the members of the trained rescue squad manned the M.S.A. Pneolator, that administered automatic artificial respiration, and fed life-giving oxygen into the youngster's lungs. After 34 tense, anxious minutes the boy stirred and sobbed. Twenty-four hours in the hospital completed the cure. The lad went home. And another glowing entry was written into the day book of history that records the heroism, the resourcefulness, and the countless deeds of unselfish public service of American firemen.

The M.S.A. Pneolator is the newest development in mechanical artificial respiration equipment, and assures maximum chance for survival in every case of arrested breathing. Oxygen supply is immediately adaptable to the age and physical condition of the patient. Elimination of the "suction" phase of the breathing cycle bans danger of aggravating lung tissue injury. Inhalator action for smoke treatment. Ask for Bulletin No. CH-2.

Call the M. S. A. man
on your every safety problem
. . . his job is to help you

MINE SAFETY APPLIANCES CO.

BRADDOCK, THOMAS AND MEADE STS. • PITTSBURGH 8, PA.

MSA

SAFETY EQUIPMENT HEADQUARTERS

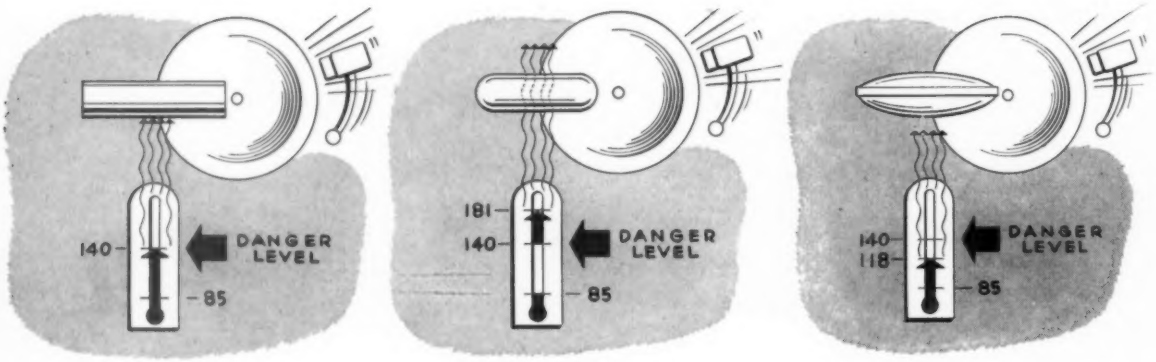
AT YOUR SERVICE

54 BRANCH OFFICES IN THE UNITED STATES AND CANADA

Rate Compensation

A New Principle of Fire Detection

Fenwal DETECT-A-FIRE horizontal mount combines unique operation with smart design



THE SHELL REACTS!

Fenwal DETECT-A-FIRE unit, activated by its temperature sensitive shell, responds *only* when the *temperature of the surrounding air* reaches predetermined danger level.

Do Away With . . .

TIME LAG

In fixed temperature detection the air temperature rises well above the danger level because of time needed for the device to absorb heat before responding.

FALSE ALARMS

In rate-of-rise type detectors calibrated to operate at a predetermined rate of temperature rise, false alarms may occur even under non-fire conditions.

New RATE-COMPENSATION principle assures positive fire detection for plants, ships, institutions, all commercial, mercantile and public buildings.

Visit our Booth 603 at the Chemical Industries Exposition, Grand Central Palace, New York

PLEASE SEND ME THE BASIC FACTS about the new Fenwal DETECT-A-FIRE horizontal unit for ordinary institutional, commercial, mercantile, industrial, and marine locations.

Name ..... Position .....

Company .....

Street .....

City ..... Zone ..... State .....

Fenwal

DETECT-A-FIRE
Precise, DYNAMIC Fire Detection

FENWAL, INCORPORATED
2410 Pleasant Street, Ashland, Mass.
111 South Burlington Avenue, Los Angeles 4, Cal.

Temperature Control Engineers

We shall appreciate your mentioning FIRE ENGINEERING *when writing advertisers*

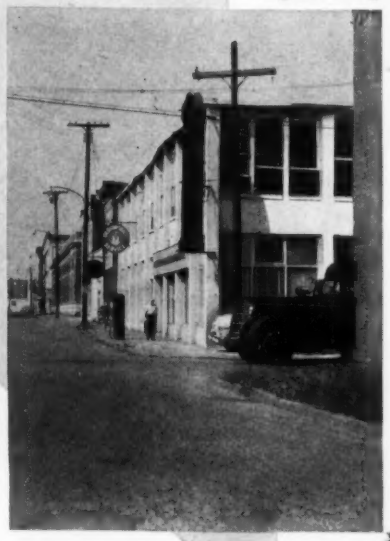
IN AMERICAN-LAFRANCE FIRE ENGINES

THERE'S *Extra Value* FOR YOU...

Better Visibility..

in cab-ahead-of-engine design

Actual photo of cab-ahead-of-engine pumper entering intersection. Drive. has clear vision in all directions without truck entering cross traffic lanes.



Actual photo of old style pumper entering same intersection with front bumper in same position as cab-ahead-of-engine pumper. The driver cannot see traffic hazards.

THE driver is up front in cab-ahead-of-engine design for maximum visibility and safety under all traffic conditions. He has clear vision in all directions, greater safety at blind street intersections. Power braking (hydro-vac) and easy steering combine with maximum visibility to insure arrival on every response. For maximum safety, insist on cab-ahead-of-engine design.

750 G.P.M. INVADER

• The tenth in a series of advertisements featuring EXTRA VALUE in American LaFrance fire apparatus.

AMERICAN-LAFRANCE-FOAMITE CORPORATION
ELMIRA, NEW YORK, U. S. A.

LAFRANCE FIRE ENGINE AND FOAMITE LIMITED
TORONTO 9, ONTARIO, CANADA

AKRON "BALL TYPE" SHUT-OFF NOZZLE and PLAY PIPE ASSEMBLY

PLAY PIPE FEATURES

• An Akron engineered quality product—completely balanced—easily handled—ruggedly constructed for severe service.

Machined to assure minimum water restriction, and to reduce friction loss.

Swiveling type metal reinforced rubber covered handles. 2½" x 1¾" tapered water way bore.

SHUT-OFF FEATURES

The matchless design and construction of Akron "Ball Type" Shut-off Nozzle assures practical and efficient service.

Smooth solid stream of maximum range.

Free operation with minimum effort at any pressure up to 500 lbs.

Brass threaded sleeve permits adjusting if necessary.

Engineered to prevent jamming as frequently occurs with solid plug type.

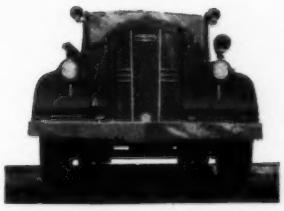
See your Akron Brass Distributor, or write to us for complete information.

AKRON BRASS MFG. COMPANY, INC.
WOOSTER, OHIO

AKRON BRASS
FIRE FIGHTING EQUIPMENT

A $200,000 fire swept St. John's Academy in Rensselaer, N. Y., March 11th, 1950 Wide World Photos

where performance counts choose WARD LaFRANCE pumpers



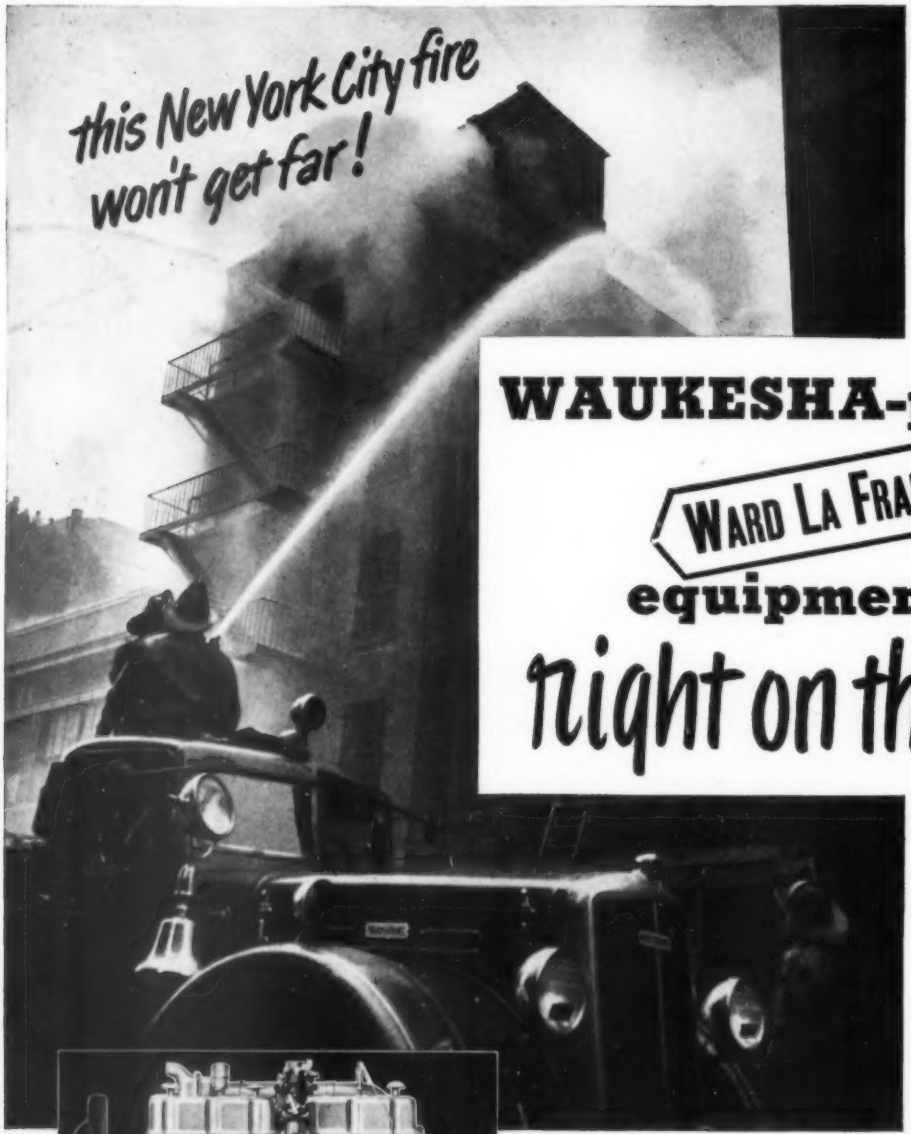
From the time the call comes in until the fire is out, you can rely on Ward LaFrance for dependable performance. Why — because every Ward LaFrance Pumper is especially fitted for its particular job, is rigidly tested before delivery to prove its fire-fighting ability.

With engines in 130, 150, 200 and 240 H.P., a complete coverage is available to skillfully provide weight-to-horsepower ratio to give quick get-away for every occasion, plus plenty of power for climbing hills. In addition, each Ward LaFrance Pumper is equipped with the famous Waterous split housing pump — surplus gallonage that far exceeds its rated capacity — flat horizontal booster tank — and exceptional hose capacity.

Next time, consider Ward LaFrance first when you're ready to select or replace apparatus for your community. Write today for illustrated bulletins.

WARD LaFRANCE
TRUCK CORPORATION
Fire Apparatus Manufacturers for over 30 Years

GENERAL OFFICE & FACTORY: Grand Central Avenue, Elmira, N.Y. *Tel. 5171*
DIRECT FACTORY BRANCH: 139th Street & Bruckner Blvd., New York 54, N.Y. *Tel. CYpress 2-3300*
EXPORT: Ward LaFrance International, Inc., Elmira, N.Y., U.S.A. *Cable Address:* "WARDTRUCK"

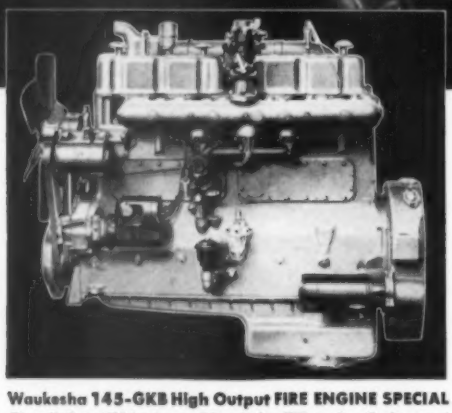


New York Daily News Photo
Courtesy
Taylor M. Ward, Inc.,
Ithaca N. Y.

WAUKESHA-powered

WARD LA FRANCE

equipment is right on the job!



Waukesha 145-GKB High Output FIRE ENGINE SPECIAL
Six cylinders, 5¼-in. bore x 6-in. stroke, 779 cu. in. displacement develops 240 hp. at 2400 rpm.

IN THE NATION'S LARGEST CITY this speedy, powerful Waukesha-engined Ward LaFrance pumper is but one of nearly a hundred similar vehicles in use by the N.Y.F.D. Here protection depends on pumper performance. And Waukesha power provides that dependability. The pumper you see here is a 240 H.P., 1250 G.P.M., 150 P.S.I. Ward LaFrance Type 150-T, with rugged pumps, and a Waukesha 145-GKB High Output Fire Engine Special for a quick start, a fast run, and to put plenty of power behind those pumps. More than thirty years of fire apparatus manufacturing experience have demonstrated to Ward LaFrance the value of standardizing on Waukesha Engines for high speed power and dependable performance. *Get Bulletin 1594.*

106

WAUKESHA ENGINES

WAUKESHA MOTOR COMPANY • WAUKESHA, WISCONSIN

NEW YORK TULSA LOS ANGELES

We shall appreciate your mentioning FIRE ENGINEERING *when writing advertisers*

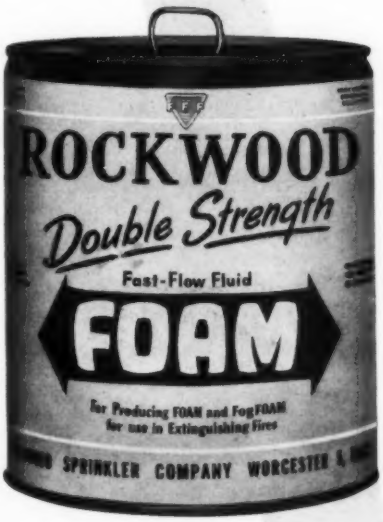
ROCKWOOD'S

New Modern Chemicals and Fire Fighting Tools Whip Gasoline Fires Faster and More Economically

The new Rockwood *Double Strength* Fast-Flow Fluid FOAM used with Rockwood's advanced types of FogFOAM and FOAM Nozzles will cover burning surfaces faster with a blanket of FOAM that completely seals off combustible vapors. This new Rockwood *Double Strength* FOAM is now available for use with hose line nozzles and permanently piped FogFOAM and FOAM systems.

We recommend these new modern chemicals and fire fighting tools to every municipal fire department, industrial plants and refineries for handling the increasing hazard of fires in flammable liquids and materials.

For the most advanced line of fire fighting products offered to firemen in half a century, write Rockwood Sprinkler Company or your nearest distributor.



ROCKWOOD *Double Strength* FOAM

Rockwood's outstanding new FOAM Liquid produces FOAM and FogFOAM for use in extinguishing fires in oil, gasoline and other highly inflammable liquids and materials. It is more fluid, faster spreading and easier to handle. Rockwood Regular FOAM—the type previously supplied—is still available for use with Rockwood devices.

NEW FFF FogFOAM NOZZLE with SCREEN

New LIGHTweight Type FFF Rockwood FogFOAM Nozzle. Available in three sizes for service on 1½" and 2½" or 3½" hose. Discharges (1) FogFOAM (with FogFOAM screen) (2) solid FOAM stream (with FOAM shaper) (3) high velocity WaterFOG pattern.

with

FogFOAM SHAPER

Rockwood LIGHTweight type FFF FogFOAM Nozzle with FOAM shaper attached.

LOOK OVER THESE OUTSTANDING ADVANTAGES...

Compare these with other types of FOAM!

More fluid • Faster spreading • Flows freely at sub-zero temperatures (—15°F.) • Greater resistance to heat • Faster extinguishment of gasoline fires • Double Strength — *a gallon goes twice as far* • Stands up under tropical climates • Easier to handle • Cuts shipping cost in half • Requires only half the space for shipping and storage • Flows freely around obstructions • Clings to smooth, vertical or curved surfaces • More efficient on fire trucks • Easy to mix with water.

FOAM EDUCTOR

Rockwood FOAM eductor introduces FOAM Liquid into hose line for use with Rockwood type FFF FogFOAM Nozzles. Eductor can be attached between discharge of fire truck and hose line, connected between hydrant and hose line or between two lengths of hose. Separate models are available for FOAM and Water Wetter.

Portable Fire Protection Division

ROCKWOOD SPRINKLER CO.

54 HARLOW STREET WORCESTER 5, MASS.

Friend of the Firefighter!

MIDWESTERN PROTECTIVE CLOTHING

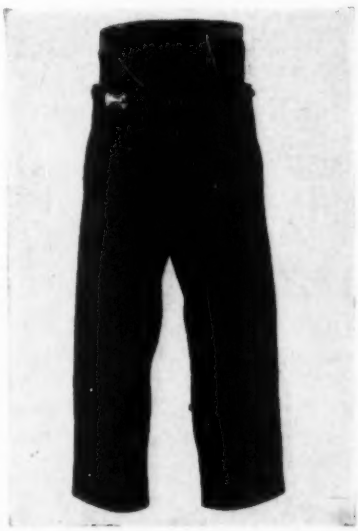
for Men of Action!

Modern fire fighting calls for *specialized* protective clothing that safeguards the fireman's life on every run . . . clothing that enables him to use his equipment to the fullest advantage.

Every Midwestern product combines the thoughts and suggestions of practical Fire Chiefs and firemen from every section of the country . . . and every purchaser profits from years of Midwestern research and experience. That is why the famous Mackinaw Coat and other Midwestern clothing have embodied in their design every feature necessary for the protection and comfort of firemen.

In our vast selection of rubber materials you will find a type of fabric suitable for your climate and needs. The softness and flexibility of the high-grade materials used are your assurance of long time service and comfort.

Due to government requirements for Midwestern Protective Clothing, it will assist in prompt delivery if you place your order early. For complete information, have your Midwestern dealer show you our full line. A letter to the factory will also bring you material samples for your inspection.



None Genuine Without This Trade Mark

MIDWESTERN MFG. CO., Mackinaw, Illinois

Manufacturers of the Famous **MACKINAW Coats**

From Childhood Every Indian Learned to Hunt -

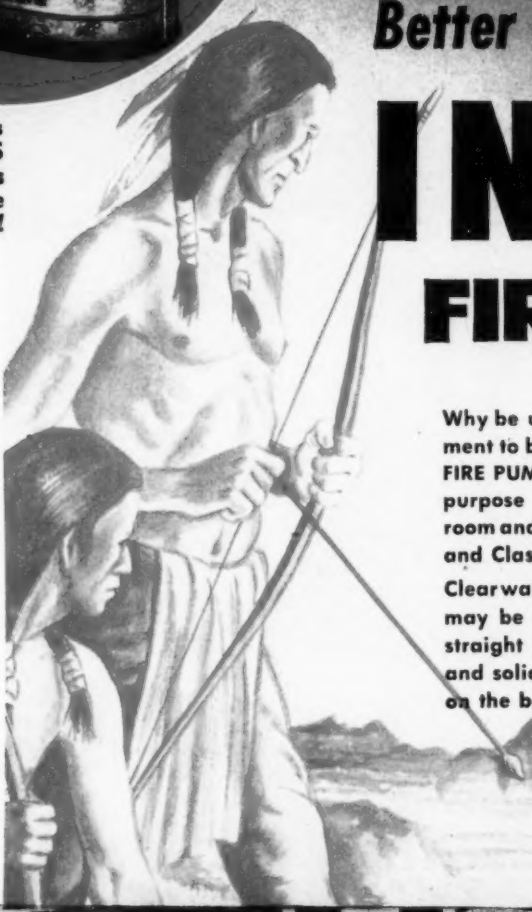
No Matter How Hard You Hunt You Can't Find Better Fire Fighters Than

INDIAN FIRE PUMPS

Civilian Defense Needs INDIAN FIRE PUMPS to protect Communities from Fire Bombs. Write us now. Be prepared!

SMITH INDIAN BACKFIRING DRIP TORCH
Widely used for slash disposal, burning right of way, etc., 1 gal. tank. Brass feed pipe. Strong construction. Designed for fire dept. backfiring work.

SMITH INDIAN DRINKING WATER & SUPPLY TANK
For carrying drinking water to fire fighting crews and refilling Indian Fire Pumps. 5 gal. capacity. Push button faucet. Carries by handle or slung on back.



Why be uncertain about what fire fighting equipment to buy when tests have *proven* that INDIAN FIRE PUMPS are the fastest, most economical, all purpose extinguishers. For grass, forest, field, room and building fires and roof, rubbish, partition and Class A fires they have no equal.

Clear water or properly formulated wetting agents may be used. Nozzle adjusts for high pressure straight stream, spray or fog mist. 5-gal. tank and solid brass pump carries by handle or slung on the back.

Let us send you our catalog. It explains everything you want to know about INDIAN FIRE PUMPS and our other products.

D. B. SMITH & CO.

406 Main Street
UTICA 2, N. Y.

PACIFIC COAST BRANCHES:

Hercules Equip. & Rubber Co., Inc.
435 Brannan Street
San Francisco 7, California

Roy G. Davis Company
617 East Third Street
Los Angeles, California

Fred E. Barnett Company
2005 S. E. 8th Ave.
Portland, Oregon

Fred E. Barnett Company
600 Spring Street
Klamath Falls, Oregon

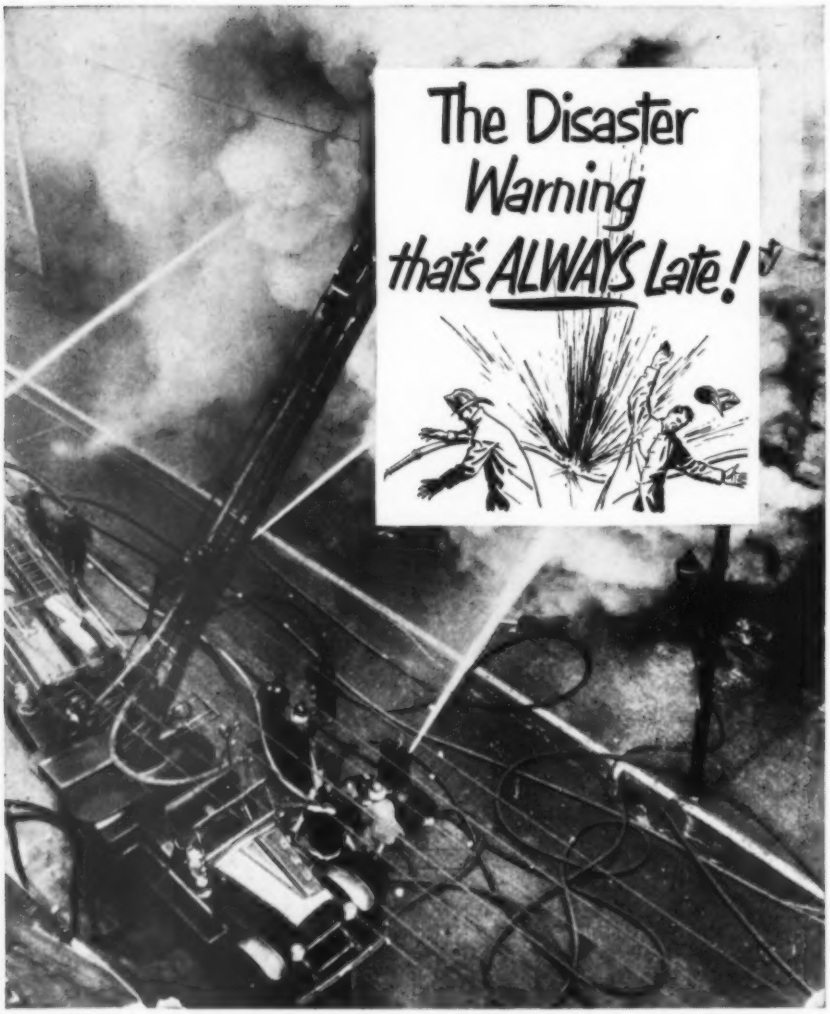
Titan Chain Saws, Inc.
2700 Fourth Avenue South
Seattle, Washington

L. N. Curtis & Sons
426 West Third Street South
Salt Lake City, Utah

CANADIAN AGENTS:

Fleck Bros. Limited
110 Alexander Street
Vancouver, B. C., Canada

C. E. Hickey & Sons, Ltd.
Hamilton, Canada



Failures in fire-fighting equipment are rarely preceded by forewarning. When the equipment fails on the job, it's usually too late to do anything but begin adding up the losses. And — far too often — these losses assume the proportions of tragedy.

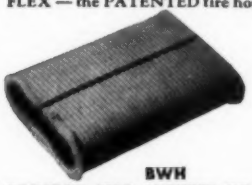
Fire hose is of topmost importance in this connection.

BWH Fire Hose, fully tested and approved . . . and backed by a reputation that speaks for itself . . . is made in a variety of styles to fill your specific needs. Light in weight, easy to handle on ground or ladder. Flat *cured* to fold fast and ride snug in truck bed. Built to give maximum long life performance under severe conditions.

Look for the "General" trademark in the classified section of your phone book. Call on our Fire Equipment experts for more details on BWH leadership of 73 years in the fire hose industry.

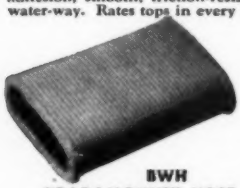
GENERAL
"INNER FLEX" HOSE
Double Jacket Construction

General INNER FLEX is the only fire hose with the genuine, smooth-folding inner jacket, especially designed to provide complete pliability. The specially woven folded edges prevent squeezing and pinching and its smooth rubber lining affords longer lasting life. INNER FLEX — the PATENTED fire hose.



BWH
"BOSTON FIRE JACKET" HOSE
Double Jacket

Heavier, stronger fibers, perfect adhesion, smooth, friction-resistant water-way. Rates tops in every test!



BWH
"PARAMOUNT" HOSE
Double Jacket

Designed for easy handling and long service on tough jobs. Ages well, withstands high pressures.

BWH
"MILO" HOSE
Single Jacket

For long, trouble-free performance in communities where a light service hose is adequate.

BWH
"UNDERWRITERS" HOSE
Single or Double Jacket

Made in strict accordance with the National Board of Fire Underwriters' specifications. Labeled or unlabeled.

BWH
DEPENDABLE RUGGEDNESS

Distributors of Famous

BOSTON WOVEN HOSE & RUBBER CO.

Municipal Fire Hose

THE GENERAL DETROIT CORP.

DETROIT 7, MICHIGAN

NEW YORK • PHILADELPHIA • ATLANTA • CHICAGO • DALLAS

Subsidiary:

THE GENERAL PACIFIC CORP.

LOS ANGELES • SAN FRANCISCO • SEATTLE

THE GREATEST
PLUS VALUE
IN FIRE
APPARATUS

OPEN TYPE PUMPER

Seagrave 70th Anniversary Model

You are invited to compare the Seagrave 70th Anniversary Model with any other fire apparatus made. Compare its engineering, its construction, its performance and the seventy years of reputation back of it. Compare it in dollar for dollar value . . . Yes, compare it in any way that you please and you will agree that the Seagrave 70th Anniversary Model is the greatest plus value in fire apparatus today.

OPEN TYPE AERIAL LADDER

Seagrave

THE SEAGRAVE CORPORATION
Columbus, Ohio
Bickle-Seagrave, Ltd., Woodstock, Ont.

THE GREATEST NAME IN FIRE APPARATUS

DUO-SAFETY Safety

THREE SECTION

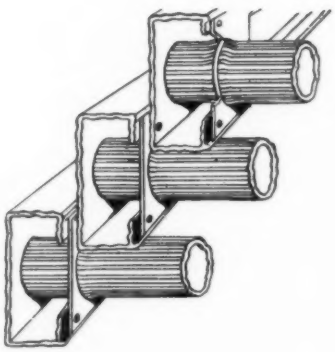
SERIES 725-A

Aluminum Three Sections

Positive safety, lightness with strength, and durability make Duo-Safety's famous 725 Series the perfect ladder for pumper use. Modern Channel Design, Duo-Safety's outstanding construction feature, was perfected to provide easier handling, tripled strength, and to replace bulky, old style solid side wood pumper ladders. The 725 Series is shorter in the banked position, provides the maximum of climbing space and both ladder flys extend simultaneously by pulling the one rope hoist. It's the ladder most fire chiefs demand for pumper use. The complete 700 Series includes: 700-A, Two-Section Extension; 725-A, Three-Section Extension; 750-A, Wall Ladder; 775-A, Roof Ladder. All models are available in all standard lengths. Write for free file catalog and price lists.

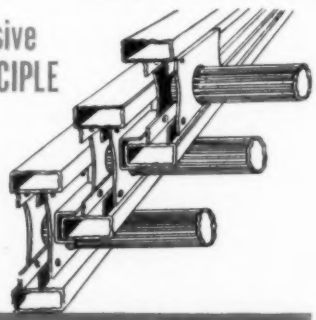
CHANNEL RAIL *For* PUMPER USE

Channel construction includes heavily ribbed rungs of extruded tubing, electrically welded to outside channel . . . double rolled head, expanded internally to prevent spreading . . . non-shearing steel rivets . . . elimination of any sharp or jagged corners. This outstanding All-Aluminum construction is ideal for pumper use.



SERIES 525-A With Exclusive TUBULAR PRINCIPLE

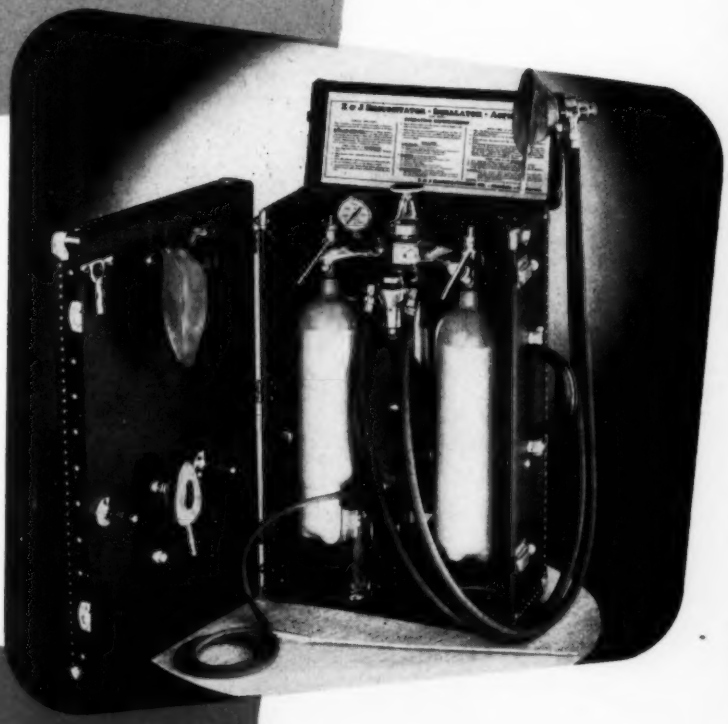
For Service Trucks, Duo-Safety's 500 Series is the ultimate in safety and *great strength*. This outstanding ladder line includes: 500-A, Two-Section Extension; 525-A, Three-Section Extension; 550-A, Wall Ladder; 575-A, Roof Ladder; 585-A, Folding Ladder.



DUO-SAFETY LADDER CORPORATION
811 Ninth Street . . . Oshkosh . . . Wisconsin

TO SAVE MORE LIVES

keep an E&J RESUSCITATOR on the job



E & J RESUSCITATOR • ASPIRATOR • INHALATOR

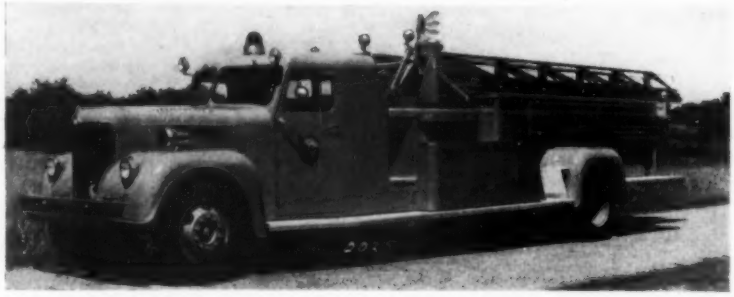
Your assurance of saving victims of asphyxiation is greater when you have an E & J Resuscitator available for immediate use. It breathes completely for the victim, using pure life-giving oxygen. It does it automatically, efficiently, safely, tirelessly and with built-in skill. Most hospitals throughout the world use it routinely; Rescue Squads say it is their greatest life-saving tool. *Don't be without it.*

ACCEPTED COUNCIL ON PHYSICAL MEDICINE AND REHABILITATION AMERICAN MEDICAL ASSOCIATION

To examine and operate the E & J yourself, get on the list for a free demonstration. Just write a penny postal or letter to E & J today.

E&J MANUFACTURING CO.
Dept. 518-7, Glendale 1, Calif.

Across the Nation . . . the Swing is to MAXIM



More and more . . . fire chiefs are depending on MAXIM . . . and for good reason . . . since the advent of motor fire apparatus we have been builders of a complete line of fire apparatus . . . and fire apparatus exclusively. Wherever you are . . . you can now put in MAXIM apparatus . . . and you can be certain of getting apparatus that is the last word in design, engineering and construction . . . and of course . . . MAXIM dependability.

MAXIM MOTOR COMPANY

MIDDLEBORO, MASS.

Americas Finest Fire Apparatus

NONE BETTER

. . . the noticeably better performance of American Fire Hose is the natural result of skillful, painstaking manufacture. American does not compromise with quality—as a result critical buyers eventually standardize on American.

LAMINATED CONSTRUCTION 5 . . . calendered sheets

CRACKERJACK

MUNICIPAL FIRE HOSE

OTHER AMERICAN BRANDS

WHITE	*TREATED
Crackerjack	Imperial
American	Arco
Municipal	Major
Lightning	Surety
Underwriters	Underwriters

*Fully guaranteed against mildew and rot; water repellent.

FLEXIBLE . . . balanced weave and premium yarn assure greatest strength and flexibility.

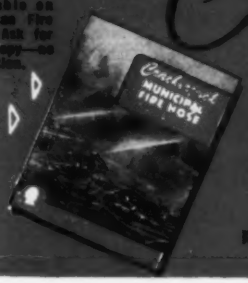
SMOOTH WATERWAY . . . lowest possible friction loss.

DEPENDABLE . . . unsurpassed for ruggedness and long life.

LOWEST COST PER FOOT PER YEAR

ASK FOR BULLETIN

Descriptive literature is available on American Fire Hose. Ask for your copy—no obligation.



THE American RUBBER MANUFACTURING CO.

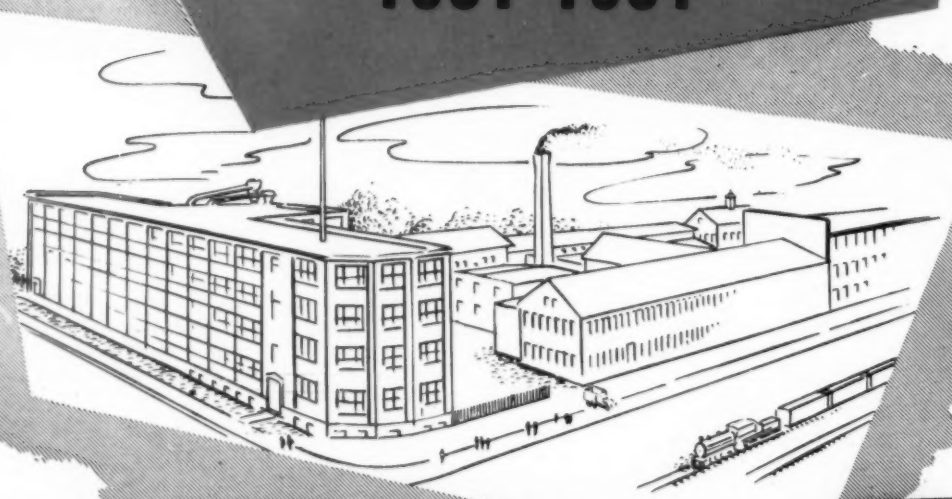
FACTORY & General Offices | 1145 Park Avenue, Oakland 8, California, Phone: OLympic 2-0800

Branch Offices: SEATTLE, Smith Tower, Phone SEneca 1727 | PORTLAND, Dekum Building, Phone CApitol 1708 | SAN FRANCISCO, 7 Front St., Phone SUtter 1-6068 | LOS ANGELES, 711 E. Gage Ave., Phone ADams 1-9279

THE AMERICAN RUBBER MFG CO. OAKLAND CALIF.

Write for name and address of your nearest American Distributor

100 Years
IN THE PUBLIC SERVICE
1851-1951



During 1851, in the City of Boston, Massachusetts, was made the first practical application of the Morse telegraph to fire signaling, providing a public and always accessible means for calling the fire department. John N. Gamewell shortly thereafter, acquired patent rights for the system of fire signaling thus applied in Boston and which has since become universally known as The Gamewell Fire Alarm System.

The well estabished reputation for reliability, durability, and efficiency of Gamewell equipment, produced by a small force of highly skilled workmen, has resulted in the widespread use of The Gamewell System not only in the U. S. A. but also in many other countries.

The Gamewell Company, lineal successor to John N. Gamewell, deeply appreciates the widespread confidence in its products and will continue to incorporate therein features dictated by 100 years experience that are essential to the protection of life and property.

The GAMEWELL COMPANY
NEWTON UPPER FALLS 64, MASSACHUSETTS
IN CANADA: NORTHERN ELECTRIC COMPANY, LTD., BELLEVILLE, ONTARIO

FIRE ENGINEERING

OCTOBER, 1951 VOL. 104, NO. 10

With the Editor

'Scrambled' Civil Defense Communications

In the July issue of FIRE ENGINEERING our readers were told about the first of a series of large-scale tests of fire service communications as related to mutual aid response and other operations, being conducted by the N. Y. State Division of Safety, Bureau of Fire, with State Civil Defense authorities.

Since the Utica experiment, even more elaborate trials were held in Niagara Falls, Rochester, and more recently, in Syracuse. During these tests, some 500 and more fire companies swung into action, either to respond to and fight simulated civil defense fires or to re-locate to protect uncovered areas. Over 4,000 fire fighters, paid, volunteer and auxiliary, manning in excess of 1,000 fire apparatus and emergency units of all kinds, were involved in these exercises. Never before has anything approaching such maneuvers been held in this country.

Although reports are not all in and collated by the Bureau of Fire, concerning the outcome of these tests, sufficient data are available to permit conclusions to be drawn and some recommendations to be made.

The first observation is that, as pointed out in the Utica study, the fire service—and when we say fire service we speak all-embracingly—carried off the glory in every single one of these tests. Said the *Syracuse Post Standard* (Sept. 16, 1951) of the recent operation in that city: "Outstanding in the test was the work of the fire departments."

To any one who saw the volunteers and their paid brothers roll in to the check points, there to be re-dispatched to 'incidents' or to stand fast, and to those who watched the relays set up, and the spirited fire control operations, it was a striking testimonial to the spirit and efficiency of the American Fire Service, particularly when many operations were performed without benefit of modern communications facilities.

Next, these experiments unquestionably proved the greatest stimulant to the other emergency services and civil defense forces that could be desired; and it goes without saying that civil defense today needs such stimulants!

Thirdly, and perhaps most important, the tests demonstrated conclusively the critical need for modern two-way and three-way radio communications, particularly communications on the fire ground, and between it and responding forces, and fire headquarters and civil defense centers, over broad areas. Of what use the best civil defense plans, thorough training, and stores of food and supplies, if in actual practice communications fail, or are totally lacking? As L. W. Goosetree, Jr., sales manager, radio communications of the General Electric, said before a group of leading fire and other officials concerned with civil defense, two days before the Syracuse trials: "In most any disaster, whether civil or military, man-made or act-of-God, normal communications facilities, such as telephone and telegraph, break down in the disaster area. Of what use is knowledge of radiation and destruction unless it can be communicated to the organization responsible for handling the problem?" N. F. Harmon, Civil Defense Coordinator of the same company, asked the same group if they were making use of radio facilities at hand to insure the best possible communication system for disaster use? The conclusion drawn was obviously *no!*

Another conclusion to be drawn from the tests is that the entire field of civil defense communications, and this includes fire service communications, is insufficent, inefficent, and inept for meeting anything like major disasters. There are presently 20,000 fixed base stations and 190,000 mobile units in the U. S. equipped for civilian two-way radio telephone communications, according to Mr. Goostree. But these units, such as police, fire, taxicabs, utilities, railroads and others are each playing their own tune. Attempts of civil defense authorities to co-ordinate and integrate these, and the wired communications services, into one homogeneous whole have thus far failed.

Some day, in some way, these many and varied communications systems and facilities will, we are confident, be joined or amalgamated into that single efficient communications entity for meeting the normal and abnormal disasters that are bound to come. Meanwhile, as the front-line, top-echelon factor in civil defense, it behooves the fire service to have, maintain and use its own radio communications facilities to the very utmost.

Fred Sheppard

Mutual Aid Proves Effective At Binghamton Armory Fire

All Available Apparatus Works at City's Largest Fire; Many Neighboring Communities Lend Aid

A STAFF REPORT

"THE worst fire in the history of Binghamton, N. Y." as it was termed by firemen, took the life of one fire fighter, and injured seven others, while causing property loss of over $600,000, early on Sept. 3, 1951.

The blaze, which gutted the old State Armory Building, at 227 Washington street, occupied by the New York State Institute of Applied Arts and Sciences, threatened all of downtown Binghamton and was only controlled by 130 fire fighters from that city, aided by neighboring reinforcements, after a three hour struggle.

In 1946, Binghamton was approved as the site for one of five experimental technical institutes to be established in New York State. After some debate, during which the question of fire hazards entered, the old State Armory building, then more than 40 years old, was selected as the Binghamton branch of the New York State Technical Institute of Applied Arts and Sciences, and given to the City by the Broome County Board of Supervisors.

The building was erected in 1903-4 at a cost of about $300,000. It originally housed the Sixth Battery Co. H and later the First Ambulance Company. Officially put to use in 1907, it became the center of activity for civic affairs, conventions and entertainments. It was abandoned in 1936 as an armory.

Binghamton firemen unable to operate on roof.

Heavy smoke foiled efforts to open Armory roof to reach spreading fire in early stages of battle. Picture taken about fifteen minutes after discovery of fire.

The structure, typical of the armories of its time, covered a large area on Washington street, running through to Water street. It was of brick and joist constructions, with combustible roof supported on iron beams. At the north end was located a medieval-type 3-story brick tower. A one story section flanked the main building at the south end.

Old Binghamton Armory doomed.

Shortly after wall blew out, wrecking metal 50-foot ladder (left), and while firemen were trying to reach a comrade who had fallen through floor. Heavy streams being brought into play to kill heat radiation.

The building was of two floors and basement. The latter contained chemical and electrical laboratory and equipment. On the first floor was located a large gymnasium, separated by a wooden partition from the cafeteria in the rear. Opening from the interior first floor hallway around the entire waist floor were classrooms and offices, including the administrative quarters. Classrooms also occupied most of the second floor. The first floor also housed a 3,000 volume library and the library files. A wooden stairway led upward from the main floor. There was also a wood balcony extending nearly around the building interior.

Typical of such buildings were the small window openings, those at street level barred for the most part; the steep sloping combustible roof and the wood interior trim, floors and partitions. Changes in the structure, including the addition of ventilator ducts, made over the years contributed to its combustible contents.

Surrounding the Armory building itself were numerous exposures including tinder box structures such as apartments with wooden porches and stairways.

For several days prior to the fire, a janitor and maintenance man had been refinishing floors in the main administrative office of the institute. They are said to have left the building about 4:30 A.M. on Sunday, Sept. 3.

The fire was discovered shortly before 4.30 A.M. by a passing mail service em-

Falling Armory wall wrecks ladder—firemen saved.

View taken about 7:00 A.M. showing firemen pouring water through breach made when wall on Water Street rear fell about 5:35 A.M., wrecking metal ladder that had been in previous accident. Firemen escaped falling wall.

ployee. He reported to a clerk in charge of the night shift at the nearby post office that smoke was coming from the armory, and the latter telephoned an alarm to Central Fire Headquarters, then ran to the building. Heavy smoke was then coming from the main entranceway and first and second floor windows at that corner of the building.

The phone alarm brought three pumpers, two ladders and a squad car, in charge of Second Asst. Chief Gerland L. Ring, who led firemen into the building in an effort to locate the seat of the fire, which at the time was not showing. As soon as it was apparent the fire was making headway through the ventilator shafts and vertical openings behind the pall of smoke, a second alarm was sounded, bringing three more engines and a ladder truck. At 4:46 A.M., four minutes later, a third alarm was struck, calling two additional engines and ladder truck, and soon after the City's remaining engine company, normally held in reserve on three alarms was summoned.

At 4:55 A.M., a Johnson City aerial ladder and engine company and a ladder company from Endicott, both neighboring communities, answered the call for reinforcements, through the Broome County mutual aid plan established within the last eighteen months.

As Binghamton's fire fighting forces were concentrated in the effort to prevent spread of the fierce fire, when it became apparent that the old building was beyond saving, equipment and men from other neighboring communities moved into vacant fire stations on the edges of the city.

The lack of openings and vantage spots from which to fight the spreading blaze, feeding on the dried out wooden interior, made it impossible to prevent extension of the fire to the roof structure. Once involved, this detail burned rapidly. Fire fighting operations, therefore, were almost entirely conducted from the exterior, where ladders were raised, both aerial and ground, and firemen swarmed aloft, with lines in the effort to minimize the flames and heat which soon shot through the roof and from upper windows. Heavy ladder pipe streams had relatively little effect, however, and shortly the sky was lighted by the brilliant flames which ate out the interior.

The worst hazards faced by the fire fighters were the interior explosions, some of which were violent, believed caused by accumulations of gas, and storages of chemicals and volatiles in the structure. Shortly before 5:00 A.M., as spectators gathered in growing numbers, a blast lifted the roof of the building and collapsed parts of the first and second floors. A vast shower of sparks shot into the sky and drifted over the area.

A crew of Binghamton firemen caught by this collapse was nearly wiped out. But by the vagaries of that fate which claim one fireman and spare others, all the men managed to escape except Fireman Jerome P. Ryan of Engine 5.

He and Fireman Stanley Matson were kneeling near a wall, just inside the entrance of the building, when the roof caved in without warning, showering the men with debris and ripping a large hole in the floor. Ryan received the brunt of the falling timber. Part of the roof caught Matson in the side but he was able to crawl to a stairway. When he heard a voice calling that Pat Ryan was caught, he returned to the entrance in an effort to effect a rescue. As Matson worked toward Ryan, however the latter dropped through the floor opening into the basement.

Additional firemen fought to reach the victim. A ladder with grappling hooks was lowered through the floor, while men went to work to cut away the bars on the ground floor window, through which it was hoped Ryan could be reached. Entrance was finally made through two windows, but it was 8:15 A.M. before a squad of men, led by Lieut. Garvey, managed to reach the spot from the southeast corner, after extinguishing the flames in the rubble, to locate their comrade. Ryan was found about 75 feet from where he originally dropped through the entrance hall floor. He is believed to have crawled in an attempt to reach a lavatory and ground floor window after his fall, but he could not quite make it. Death was attrib-

(*Continued on page* 842)

Flames have full command of Armory roof.

Fire started in wood balcony and swept upward through Binghamton's old Armory to involve roof and classrooms, gutting structure. One fireman was killed. View taken about 45 minutes after start of fire.

London Fire Brigade Makes Effective Use Of Radio

By PAUL C. DITZEL

THE London Fire Brigade covers 117 square miles with a ratable value of £54,418,059. Headquarters of the brigade are located along the Thames River on Albert Embankment, facing the Houses of Parliament and "Big Ben."

There are 58 land fire stations and three fireboat stations, one of the latter directly across the street from fire headquarters. The brigade lists 2445 men in the latest issue of the "Fire Protection and Accident Prevention Yearbook."

Included in the brigade's equipment are 66 motor pumps (pumpers) 78 pump escapes (an all-round piece of equipment, a combined pumper and ladder company), 19 turntable ladders (hook and ladders), three emergency trucks, 2 foam wagons, 2 hose-laying trucks, one control unit, 5 fireboats, and 2 fireboat tenders. There are 32,075 fire hydrants.

Chief Officer F. W. Delve says his brigade now is replacing many war-worn rigs with new apparatus. No piece now in service is more than 17 years old.

During the last year for which figures are available, the brigade received 19,751 calls.

England, under wartime nationalization of its fire service under the Act of 1947 was divided into 12 fire regions. Under the 1947 act, responsibility for maintaining efficient fire services was placed upon the county councils and county boroughs. That accounts for the L.C.C. (London County Council) painted on the sides of London's fire equipment.

On April 1, 1948, duties which had previously been carried out by the National Fire Service in England and Wales were assumed by county borough fire brigades established in accordance with the act. It makes provision for combination of areas and for mutual aid between brigades and for the supply of water for fire-fighting purposes.

The act also lists powers enabling the secretary of state to make regulations covering the conditions of service and pensions of brigade members, standards of equipment, training and efficiency. A treasury grant is payable to fire authorities under the act toward the cost of maintaining the brigades.

A number of counties and county boroughs have joined to form either joint fire brigades or combined fire authorities. The total number of brigades now in existence in England and Wales is 134.

Prior to nationalization in 1941, there was no real uniformity of hose size, hydrants, or fire apparatus. The nationalization act, for which Chief Officer Delve was greatly responsible, set up fire service standards for the whole of England and Wales.

Chief Delve says all turntable ladders in London have 100 foot aerials and have pumps as well. Normal assignment to a first alarm fire is two motor pumps, one pump escape. A turntable ladder is sent additionally in some areas Outside of London itself, however, no turntable ladder responds unless specifically requested. Pump escapes carry hose, pumps, and breathing apparatus.

London's central fire alarm office is located underground at the headquarters station. Oddly, the well of the fire alarm office backs up against the Thames River. It is this room, of the two-room alarm office, that contains the fire department radio.

When a person reporting a fire dials "999" the telephone operator at one of London's 69 phone exchanges is alerted by a ringing bell.

The supervisor at that exchange plugs in the call and asks, "Do you want police, ambulance, or fire?" This call is automatically recorded and both the supervisor and the operator for that district monitor the call. The supervisor can quickly tell from which telephone kiosk the call is coming. If the caller wants the fire brigade, the call is transferred to London's central fire alarm office.

A red light flashes in the alarm office and one of four switchboard operators there plugs in the call. It was interesting to note that the London alarm office functions much like a central artillery command post. When calls are not being received, the alarm office dispatchers and operators sit or stand stiffly at attention. There is no unnecessary noise or talk.

An "index man," a separate job from that of switchboard operator, jumps to the side of the operator receiving the call and looks over his shoulder as he writes down the address of the fire.

The switchboard operator asks the person reporting the fire to repeat the street location. Those on duty in the alarm office do not especially care what is burning. All they are concerned with is the location of the fire. Each fire alarm, except chimney fires, gets a full response.

While the switchboard operator is rechecking the location of the fire, the index operator steps to a revolving index file which alphabetically contains the name of every street, alley, boulevard, and place in London. There are 24,000 cards in the file.

Each card, about three by five inches in size, shows the "predetermined assignment" for that street. There are never less than three pieces due to respond on a first alarm and always from two or more stations on these cards. The predetermined assignment has been figured out on the basis of a survey of each London street to determine the type of buildings on the street, their height, and the nature of their contents, plus exposures.

The index operator, upon locating the card, notifies the switchboard operator which stations and pieces to send. The switchboard operator pulls a toggle key in front of him, which sets off a bell in the stations to respond. He then announces:

Photo by Paul C. Ditzel

Control van of the London Fire Brigade. This unit serves as the central point at extra alarm fires in London. It carries walkie-talkie radio equipment plus a mobile transmitter in the rear for communication with the central fire alarm office.

"Turn out your pump, pump escape, and turntable ladder to . . ." such and such an address.

The next nearest pumper also is notified in the same manner. The next nearest pumper is determined not by its geographical proximity to the fire but by the speed with which it can respond to a given location.

Photo by Paul C. Ditzel

Scene in the London Fire Brigade's central fire alarm office. The man at the left is called the "index operator." He locates the "predetermined assignment" card in the rotating file. Then he gives the assignment to the switchboard operator (right of him in the picture), who notifies the companies due to respond.

Before the index operator gives the assignment to the switchboard operator, it is the index man's responsibility to check a large wall map located in the front of the alarm office to determine if the equipment due to respond is in service.

This map shows, through colored pins, the locations of all London apparatus. A red top denotes a pump escape, the vehicle with a wheeled ladder attached to the rear. This ladder can be caromed off the back of the rig and wheeled to the desired site, where its wheels are blocked and the ladder extended. All these pump escapes are equipped with two-way radios and at least one pump escape responds on all fires.

Blue pins signify pumpers and yellow ones turntable ladders. Green tabs denote emergency tenders. Chief Officer Delve says the complete operation, from receiving the phone alarm to sending it out, takes 30 seconds. It takes an additional 15 seconds for the companies to roll out of their quarters.

As the alarm is transmitted, another fire alarm officer attendant removes the proper tabs from the geographical map of London and places the tabs on an adjacent blackboard. He writes the location of the fire on the board and after it places the numbered tabs of the equipment rolling to that address. On the assumption the first alarm assignment might need assistance, an additional assignment is readied.

Shortly after the officer-in-charge of the fire arrives on the scene, it is his duty to radio back to the fire alarm office radio room, located in a separate room off the central fire alarm office, what type of fire he has. If he can handle the blaze with the predetermined attendance equipment, he radios back something like: "Small fire at the rear of 60 Strand. Hose reel in use. STOP!" This "stop" is London fire shorthand for, "I can deal with this fire with the predetermined attendance."

Many American cities would call this "striking out," "ringing out," or "recall." This message also "stops" all divisional officers and police who were alerted when the alarm came in.

An alarm sent to the fire station is written down by the "duty officer," who gives it to the officer-in-charge responding to the fire. The man on watch remains at his post and does not turn out with the equipment.

There are 12 men on duty in the fire alarm office during each tour of duty. All fire alarm operators have had fire service and several of them have been permanently incapacitated while fighting fires. There are two operators with only one leg and one man who is blind in one eye. During the war many of the regular operators were needed to fight fires during the London Blitzes and they were replaced with women.

If additional men and apparatus are needed at a fire, the officer-in-charge radios back not for a second or third alarm as he might in the United States, but for the equipment he believes he will need for the fire.

He might radio, "Make pumps 10, turntable ladders two!"

In other words, he knows he has or is about to have two pumps or pump escapes and one turntable ladder on the scene. But he wants this assignment to be increased by eight more pumps or pump escapes and one turntable ladder. In this manner, explains Chief Officer Delve, there is no confusion as to how much apparatus the officer-in-charge is calling for.

It is within the province of the first-arriving officer to radio in a call, "Make pumps 50!" and there are numerous instances where an officer has done this, particularly where a fire has gained considerable headway. Mr. Delve explained a "Make Pumps 50" is not uncommon for rubber warehouse fires or blazes along London's expansive waterfront.

On all second alarms, or as our London friends would say, a "Make pumps five" a control unit responds. This wagon serves as the central command post at a fire and carries a staff officer.

His duties are to supervise all matters not directly concerned with firefighting: organizing and controlling all communications on the fireground, parking of appliances, provision of water, relief crews, special equipment, refreshments, maintaining liaison with the fire alarm office, giving information to the press, co-operating with the police, officials of water companies, gas and electric utilities.

"Water Specialist" Responds with Rig

Among the men responding with this rig is a water specialist who, with the aid of large scale water maps and his own background, has complete knowledge of water supplies in London.

There also is a photographer riding with this unit whose sole job is to take still and motion pictures of the fire. These pictures are used in preparing reports, to show fire damage, and cover all other aspects of the fire.

In the front of this control unit are relief maps of the London dock area plus blueprint type maps of many potentially serious hazard areas in London. There also is a blackboard in this rig. In the front are five walkie-talkie radios. These five walkie-talkies, plus two which are carried in each divisional officer's car, are strapped onto aides of fire officers. These aides must not stray more than three feet away from their superior officer.

The control unit is equipped with a master walkie-talkie set complete with loud-speaking facilities which give easy communication between the officer-in-charge of the fire and the officer-in-charge of the control unit.

Moreover, all messages exchanged on the fireground are overheard and recorded in the control unit. By these means a minute-by-minute record of the operations is easily kept.

In the rear of the control van is a mobile transmitter which operates on a separate frequency from the walkie-talkies and maintains contact with the central fire alarm office.

This command rig, put in operation two years ago, was designed and built by the London Fire Brigade and originally was a mobile kitchen. It accommodates nine men and also carries emergency lighting equipment, additional breathing apparatus, resuscitators, first aid supplies, and a portable amplifier.

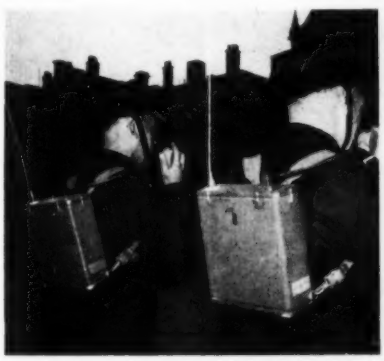


Photo by Paul C. Ditzel

Two members of the London Fire Brigade demonstrate the brigade's walkie-talkie radio equipment. At a special test for the benefit of a FIRE ENGINEERING correspondent, these sets were operated in an elevator in a concrete block, metal-framed building. Reception at the control van, several hundred feet away, was perfect.

Chief Officer Delve, who is proud of his brigade's radio, said he has a joint radio scheme with the Kent, Middlesex, Croydon, and West Ham fire brigades. There are two 100 watt AM stations located at Hampstead, the high spot in London and six miles from headquarters. Call letters are M2FH and they broadcast on a frequency of 98.2 megacycles.

London has 80 mobile units equipped with two-way radio and the other nearby brigades have 15. The fireboats also are equipped with two-ways. The walkie-talkies operate at 99.9 megacycles and the mobile talkback frequency is 81.9 megacycles. The radio was placed in service in 1942. All radio messages, incoming and outgoing, are recorded.

"Radio is essential to modern day fire fighting," declares Mr. Delve. "I often wonder how we got along without it.

"Radio was most useful during the raids with incendiary bombs during the early months of 1944 and subsequently in the attacks by flying bombs and

rockets which occurred in 1944 and 1945," he said.

This Fire Engineering correspondent attended what would correspond in the United States to a third alarm fire. The blaze was in Old London, close by St. Paul's cathedral. Several days later Chief Officer Delve took me on a tour of the entire fire ground and patiently explained the many difficulties this peculiar fire presented to him and his department.

Photo by Paul C. Ditzel

Geoffrey F. D. Pratt, Editor of "Fire Protection and Accident Prevention Review," contemporary of FIRE ENGINEERING, chats with Chief Officer F. W. Delve (right), of the London Fire Brigade.

At 7:28 one morning late in August, telephone calls to the central alarm office reported, "smoke issuing from Queen Victoria Street, and manhole covers exploding." Many homes and stores in the area were without light.

When first arriving apparatus pulled down the street they could see nothing but thick black smoke rolling up from gratings located every 50 yards. Heat from below was so intense it melted tar on the road.

The street was constructed of wood blocks with pitch covering. At 8:20 a.m. the firemen were able to gain access to an underground tunnel, between three and six feet below the street, where the fire appeared to be burning.

At 8:45 a.m., a special call went in for two emergency trucks carrying additional breathing apparatus and manned by a crew of 12 firemen specialists in use of the masks.

Thirteen minutes later, at 8:58 a.m., a "Make pumps 5" call went in and the control unit with six more sets of breathing apparatus responded.

Chief Officer Delve who also responded said their initial problem was to find the fire and gain access to the underground tunnel which carried a 24-inch gas main and electric and telephone cables.

Citizens living along the street reported strong gas odors in their buildings. Police evacuated some buildings and turned out electric lights in others.

An especially great difficulty presented itself to Chief Delve because of the small grate openings along Queen Victoria street. None of them was big enough for a man to descend below the street. So Chief Delve and his men were forced to go to two other grated openings, each about three feet wide by six feet long to gain entrance to the tunnel. These gratings were between 500 and 600 yards apart.

"To the men nearest the fire it was like thrusting their faces into an open furnace door," said Chief Delve in describing the tunnel fire.

"Even with our breathing apparatus, it became difficult to breathe. Men found it difficult to stand the heat for more than 10 minutes at a time."

Chief Delve said the entire tunnel looked like a "sheet of flame" with the center of the fire about 300 yards away, or about the middle of the 500 to 600 yard long tunnel. The brilliance of the flame gave a true indication that the fire was coming from a broken 24-inch gas main.

Fire fighting operations were further hampered because of the firemen's helmets. The tunnel was about 5½ feet high and the firemen were forced to stoop over in order to proceed along the passageway.

Chief Officer Delve said more than 100 firemen with breathing apparatus were available to descend into this tunnel. He gave considerable credit to his radio system in fighting the fire. Thirty of the honored men, wearing masks, went down in the tunnel.

There were no indications where the tunnel might lead. The gas company, which also responded to the fire, did not have a map of the underground tunnel or keys to open the grates. Neither Chief Delve nor the gas men could tell whether the tunnel was straight or whether it branched out to other streets.

Moreover, if he used heavy streams of water, there was a chance of snuffing out the fire and building up a concentration of gas in any one of the buildings along Queen Victoria street, or even in neighboring streets, and the resulting potential of an explosion. Three-inch supply pipes led off the 24-inch main.

Construction of buildings in this part of Old London is "a natural" for a fire of conflagration proportions. Insofar as this fire was concerned it was fortunate that a good chunk of the property along the fire line had been bombed out during a Blitz.

But a gas explosion could have caused a fire of near conflagration proportions. Moreover, the tunnel could have led to other gas mains and an explosion resulted several blocks from the fire scene. This was the problem which confronted Chief Officer Delve when he put his walkie-talkie units into action.

With one walkie-talkie unit at each end of the fire and the control unit used as the central command post, the masked firemen descended into the tunnel and along its smoky length to the seat of the fire. Chief Officer Delve, using the blackboard in the control van, mapped the progress of his walkie-talkie equipped firemen.

Meanwhile, other firemen on the street above dropped lines down through the small gratings and, as the firemen below the street groped along the tunnel, they could further tell their progress as they found these dangling ropes.

Chief Officer Delve further constructed his fire scene by keeping track of the number of feet of hose which went into the tunnel. By the time the seat of the fire was reached, he said, 700 feet of line went in. Water fog was used to cool the tunnel.

The gas crew, which responded, not only was not equipped with maps of the underground mains, or keys, but it did not carry material for capping the burning gas leak. Moreover, Chief Officer Delve could not determine whether the electric and telephone cables had been shut down.

It is fires like this one and those with which London had to cope during the Blitzes which make the London Fire Brigade one of the best in the world. Imagine 2,500 fires, each of which would be of second alarm proportions or better, burning in your city at one time! This happened during some of the London Blitzes. So you can imagine what caliber of firemen our London friends have developed into.

Low Forest Fire Losses in Connecticut

Effective firefighting organizations set up by the Connecticut State Park and Forest Commission, plus an alert public, succeeded in keeping Connecticut's 1950 forest fire losses to less than 2,000 acres, according to information supplied by American Forest Products Industries, national sponsor of the "Keep America Green" program.

The report, based on U. S. Forest Service figures, noted 575 fires in Connecticut in 1950 which burned 1,907 acres—one-tenth of one per cent of the State's 1,907,000 timbered acres.

The 575 figure was the second lowest in Connecticut's history, bettered only by the record of 531 in 1948. The average number of acres burned per fire in 1950 was 3.5, well below the average of 4.6 for the last 15 years.

The report blames careless debris burners and smokers for the majority of the fires. Of the total number, 236 were started by careless debris burners, and 163 were charged up to careless smokers. Other causes were listed as follows: Incendiary 17; campers, eight; railroads, four; lightning, one, and miscellaneous, 146.

One big fire burned some 450 acres in the northeast part of the State. This particular blaze originated in Massachusetts, but crossed the Connecticut line.

Connecticut, which has all its forest land under organized protection, is one of 30 states participating in the "Keep Green" education campaign to prevent woodland fires.

However, J. C. McClellan, Chief Forester for AFPI, stressed the need for greater cooperation by the public in preventing woods fires—most of them caused by local residents.

"Man's most effective tool in preventing forest fires is education," he declared. "An alert public, aware of its collective responsibility for preventing fire in the woods can keep Connecticut's forests green, growing and productive."

TOM MAGNER.

Grass Fires Put Out by Tractor-Trailed Dirt Blower

Fires in fields of grass, grain or low brush may be extinguished with a trailer to a farm tractor which picks up fine dirt from the ground and discharges it on the burning materials. Scrapers positioned ahead of a rotary brush reduce the earth to a fine dirt which the brush can pick up. A suction fan blows the collection out through a discharge spout which is pivoted so that it can be swung from the rear to either side. Patent 2,561,701 was awarded to John E. Hurlbert, Dishman, Wash.

Science News Letter, August 25, 1951

Fire Service Ladders and Their Use—Part XVII

Ladder Evolutions: Two-Man Operations; Straight and Extension Ladders

By ROI B. WOOLLEY

Editor's Note: **In the September issue, Part XVI, the first of the chapters on ladder evolutions was introduced. This covered the simple one-man operations of carrying, raising and placing the short extension ladders. At that time, readers were counseled to review the installments on evolutions with Part XV in the August, 1951, number which discussed handling, carrying and climbing ladders, and Part XI on placement of ladders.**

This chapter continues the series on evolutions with description of two-man operations, using short extension ladders. Again grateful acknowledgement is made to the Committee on Firemen's Training, National Fire Protection Association, and the Joint Committee on Evolutions, of the Fire Department Instructor's Conference, Richard E. Vernor, Chairman, for permission to use the photographs taken by H. F. Rothery, Photographer, District of Columbia Fire Department.

The author also desires to thank the many members of the International Association of Fire Chiefs, and others too numerous to mention, for their assistance in the effort to reduce fire service ladder evolutions to the simplest, safest terms.

Readers will find it helpful to review this Chapter with Part XVI in the September number.

IN the preceding installment (Part XVI), the evolutions were described from the time the man had removed the short extension ladder from the apparatus and placed it on the ground, with the fly underneath. This is not the position in which most short extension ladders are carried on the ladder truck because the main section of the extension ladder is of necessity carried underneath the fly so that it may be most efficiently stowed in the body of the apparatus, and most easily be removed and replaced in the guides or channels. As was pointed out in Part XVI, actually in the one-man pickup and raise, it matters little whether the fly be under or above. If placed under, as some instructors prefer (Fig. I, Part XVI) it will be necessary to turn the ladder over after it is removed from the apparatus.

In order to keep the continuity of illustrations, we begin the two-man pickup the same way, i.e., assuming that the two men have removed the ladder from the apparatus (as in Fig. I, Part XV, August, 1951) and after carrying it to the point of use, have placed it on the ground with the fly under.

It will be noticed in the illustrations of this extension ladder (24 ft.) that the beam of the main section is marked with a white stripe indicating the center of the ladder. This is to facilitate tying of ropes and carry. It will also be noted that the ladder illustrated is painted white at both ends. It is the universal custom to paint the butt end of all ladders black, or a different color than the tip, which is usually painted white to render it more visible.

In Fig. I The men are in position to pick up the ladder, facing the top, or tip; hands are in the center of the sec-

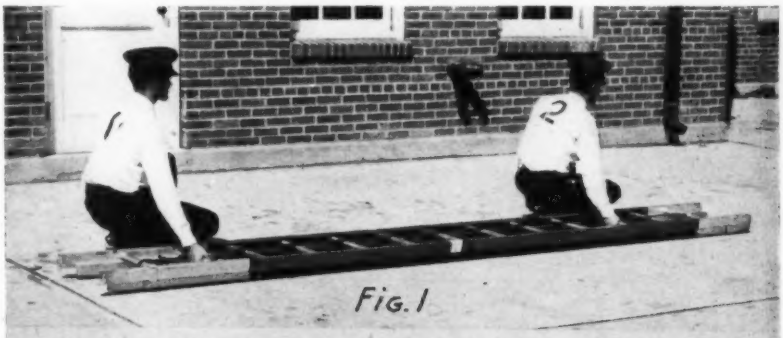


FIG. 1

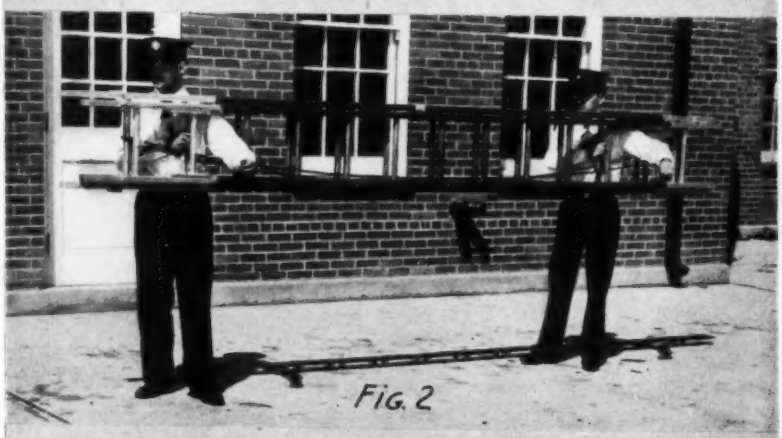


FIG. 2

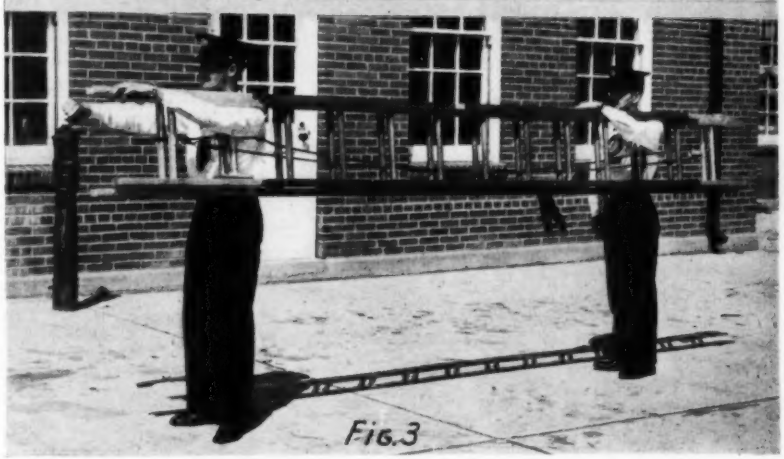


FIG. 3

ond rung, palms to the front. In this position leverage of the legs relieve the strain on back and arms. It should be noted that the men are facing in the opposite direction from that which they will take for the carry.

In Fig. II the men have just picked up ladder and are shown completing their pivot, to reverse their direction. The left arm of each comes through the rungs as the right hands maintain firm grasp on the rungs. As men face forward, the ladder is fully raised to the shoulder, the left arm coming up to grasp the rails or beams.

The pick-up evolution is completed as the men are ready to step off with their shoulder carry. The left arms have been carried through and the hands grasp the beam. The forward man's hand may be placed over the butt or heel end of the ladder. However, in this position there is always risk of injury to the hand over the heel plate. Therefore, some instructors advocate the hand either grasp the forward rung, or the beam.

It will be noted this carry leaves the right arm and hands free so that the forward man may fend off obstacles.

After reaching their objective, the ladder is placed on the ground with the fly over or under. If a beam ladder, as shown, the preference, and by far the more common procedure, is to have the fly on top, which makes it easier for the man butting or heeling the ladder, and prevents "rocking" of the ladder.

In Fig. 4 the men are in position to raise the ladder; the heel or butt man grasps the second rung with his hand. His feet are on the beams bringing his weight as far back as possible. The forward man takes the same position as shown in Fig. I, the right hand grasping the third rung from top, with palm forward.

Men are now ready to lift, on command (either from officer, or one of the two men on the lift.) Fig. 5 shows this operation. Here the man at the ladder top has lifted up his end, and is pivoting from left to right, to get under the ladder. Left hand is grasping the rung above the one held by the right hand, which is being released to join with the left hand in bringing leverage on the ladder. Heel man watches the tip of ladder and pulls back.

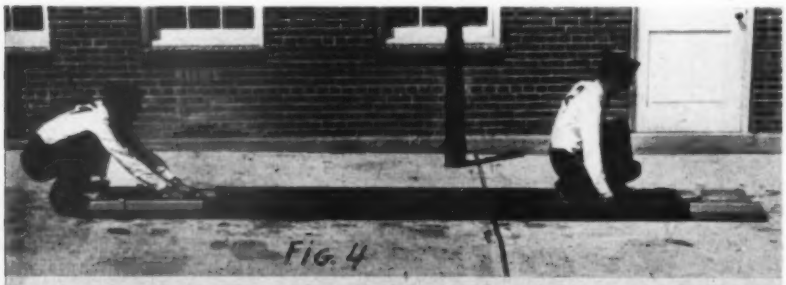


FIG. 4

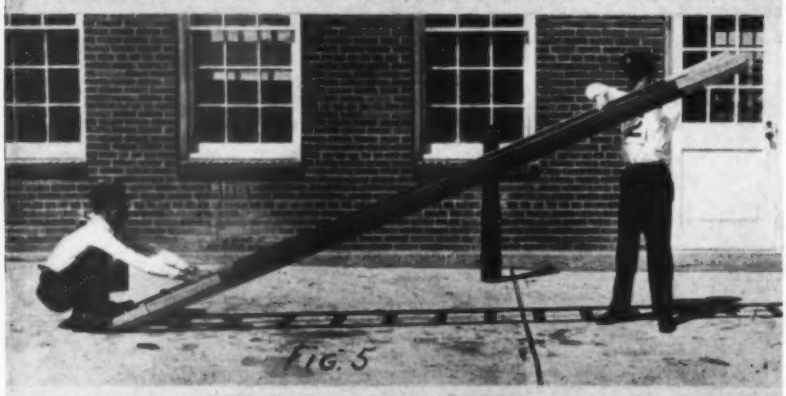


FIG. 5

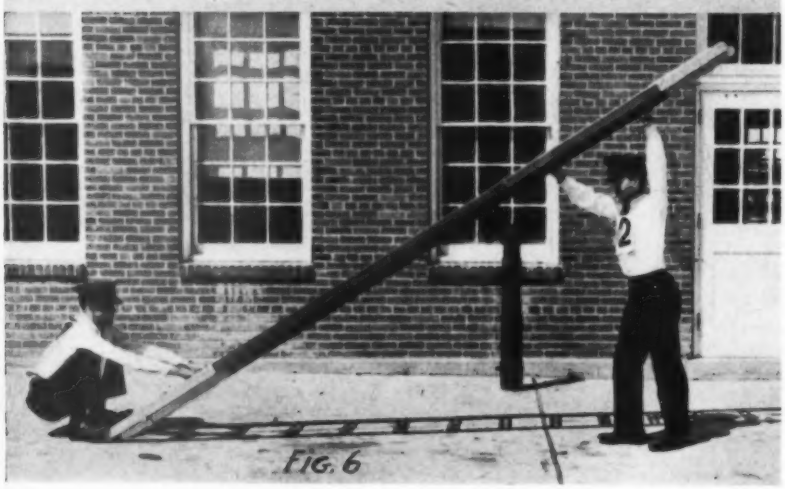


FIG. 6

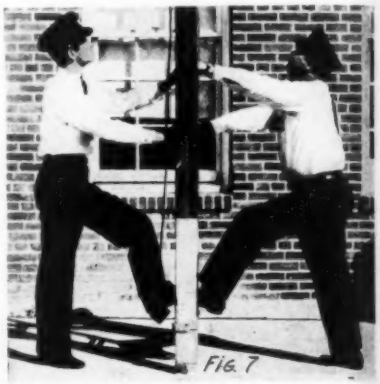


FIG. 7

Fig. 6 shows the man at the tip "walking' the ladder upward, as his mate exerts all possible pull on the lower section of the main ladder. Note: Some instructors suggest the man using the rungs, place hands on every rung rather than every other rung as shown in Fig. 6. Either method is acceptable, the best being that which results in least strain for the operator.

Another point on which there is some slight difference of opinion is that of the position of the head of the man raising the ladder. In the illustration he is looking downward, more toward the ground than toward the rungs of the ladder, which is advisable. By watching to make sure the hands grasp the proper rung as the ladder is elevated, the eyes also take in the foot of the ladder and may be quick to note any slip or wobble, should the butt get away from the heel man.

There are a number of methods employed in the two man raise to hold the short extension ladder vertical. The one pictured in Fig. 7 is generally considered most acceptable. In this the left feet of the two men are placed on the lower rung, the men standing erect with arms at length, and with the hands grasping rungs approximately on a level with the shoulders, as shown; the left hand a rung above the right. The eyes are directed at the top of the ladder. In this position the fly of the ladder may be toward either man, depending upon whether it was above or below the main section of the ladder when it was raised. In laying it in to the building, it is necessary to pivot the ladder at least a half turn in either case.

Pivoting the ladder in order to set it for raising the fly is shown in Fig. 8 in this illustration, one man has removed his foot from the lower rung and turned so as to bring the ladder around, as the other man helps pivot it, on the one beam. One foot is kept on the bottom rung, it will be noticed, while the hands of both men are still on the rungs, at about shoulder level. Both men continue to watch the top of the ladder.

In the position shown, the fly is being

Fig. 8

Fig. 9

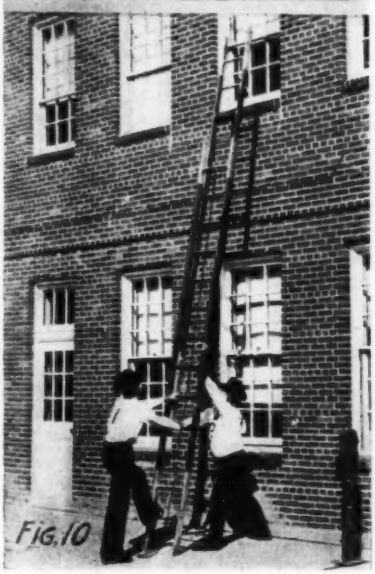


Fig. 10

brought under or toward the building against which it is to be raised. This brings the halyard on the outside, which is claimed by some to be an advantage inasmuch as it better permits the halyard man to watch the tip of the fly ladder in raising it. Countering this is the contention that if the halyard man stands or leans back from the ladder, as he may do to watch the tip as it is raised, he may pull the entire ladder over upon him. However, this is not quite as possible in the two-man operation as in the one-man raise (see Part XVI). When the fly is raised

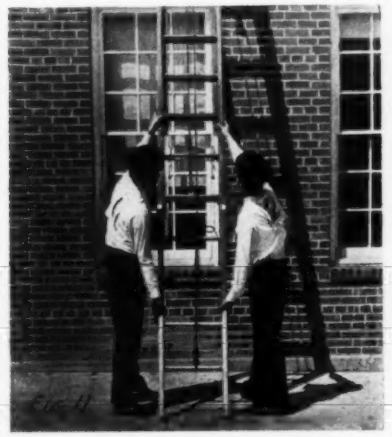


Fig. 11

away from building, the second, or inside man becomes the halyard man and in so raising the fly the outside man can easily help him determine the correct height to which fly is to be elevated. Should, for any reason, the ladder get away from the butt man in this case, it will fall **toward the wall** instead of away from it, as would be the case should the ladder get away while the fly is being raised toward the building instead of away from it.

In Fig. 9, one recommended method of raising the fly is shown. In this picture the fly is toward the building, or under the main section. The outer man operates the halyard, raising the fly to the desired height, using both hands on the rope. The inside man supports the ladder by the beams—**never by the rungs**, while both men watch the tip of the fly. In this position the inside man has just as good a chance to check on the height as the halyard man who, of necessity, remains close to the ladder.

Some instructors recommend that in this operation one foot of each man be wedged against a heel of the ladder to provide against slipping of the heel.

The procedure of lowering the extended ladder to the building is illustrated in Fig. 10. Here the outside (halyard) man, having set the ladder locks, grasps two rungs, much as was done in pivoting the ladder, while the inside man grasps one rung higher than in the pivoting operation, leaning his weight against the ladder to check its fall. The outside man places one foot on the lower rung to prevent any slippage. Both men watch the tip of the ladder.

In this illustration, like the preceding ones, the fly is below or nearer the building than the main section. The procedure for lowering the ladder in to the building is the same, whether the fly be toward, or away from the building. In

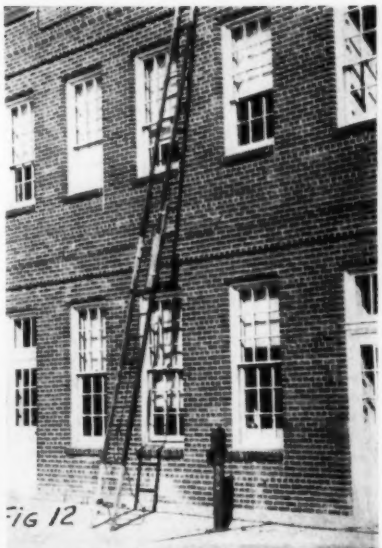


Fig. 12

Fig. 13

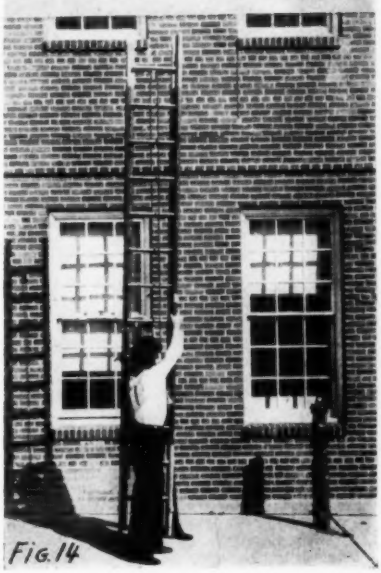


Fig. 14

either case, also, it is not necessary to attempt to secure the halyard until after the ladder is supported against the building.

The need of care in lowering a ladder into the building is shown in this illustration. With fly extended as shown, should the ladder be allowed to drop uncontrolled into the window, to which it is raised, it would almost certainly break the panes.

The final adjustment consists in bringing out—or moving in—the heel of the ladder to meet the recommended formula for placement. Fig. 11.

In moving the ladder under these conditions, both men grasp the beams and act in concert. It will be noted that the halyard has been secured above the fourth rung from the bottom with a type knot that is easily untied.

Fig. 12 shows the beam extension ladder raised against a building with the fly **out**, or **away** from the building. Readers of this Journal will recall that practically without exception, all beam ladders they have seen used, and as advertised and shown by the manufacturers, are raised with the fly in this position. This is the safer, more efficient practice and is the one recommended by the compilers of this text.

Figures 13 and 14 illustrate the suggested method of moving the extension ladder, in vertical position. The fly ladder is first lowered, after the tip of the ladder is moved out from the wall (following the same procedure as setting it in only in reverse); the fly is lowered, after the halyard has been untied; then the two men take position each with a shoulder toward the ladder; facing in the direction of travel; the hand, nearest the ladder grasping the second rung from the bottom, with the upper hand on the beams. In lifting the ladder from the ground it is good practice to tilt it slightly forward. The men both watch the tip of the ladder, once certain that the ground over which they are to move in shifting the ladder is free from obstructions or other hindrances that might throw them off balance.

Some instructors recommend that one man watch the ground and direction of travel in moving with a vertical ladder, while the other gauges the top of the ladder. The success of this evolution is dependent upon coordination of movements of both men and for this reason the method shown in the illustrations is recommended as preferable.

The ladder is lowered following the procedure shown in Fig. 6 only in reverse action.

Hottest Man-Created Fire

The hottest flame that man has ever created, fluorine burning in hydrogen, at 8,000 deg. F., was described by Dr. A. V. Grosse of Temple University's Research Institute in September, at a meeting celebrating the National Bureau of Standards fiftieth anniversary in Washington.

Comparing the flame directly with the sun, Dr. Grosse and his team found that at ordinary atmospheric pressure the temperature was 7,000 deg. F. which increased to 8,000 deg. F. when under five atmospheres pressure. The sun temperature is 9,000 deg. F. and with higher pressures, the Temple scientists expect to reach sun temperatures on earth.

It is said that so far the hydrogen fluorine flame has no commercial use.

WIRE AND CABLE PLANT BOASTS EFFICIENT FIRE DEPARTMENT

No Fires in Six out of Eight Years; Fire Prevention Stressed

By Dan Rice

When the fire alarm blows in the Bristol Plant of the U.S. Rubber Company everybody gets excited, and for good reason, too. So infrequently does this happen that the employees and townspeople think it is some special call to an extraordinary event.

The Bristol Plant manufactures electrical wires and cables, as part of the operations of U. S. Rubber Company system, and though few people realize the scope of its activities, the plant employes about 1200 and produces millions of feet of wire and cable annually for consumers throughout the world.

The factory, a large sprawling group of buildings covering about 20 acres has been operating for over 60 years. It is located in Bristol, Rhode Island, midway between Providence, the capital of the State, and Newport, the summer playground of the country, and has a good deal of exposure to the normal hazards of insulated wire and cable manufacture.

Like other U. S. rubber factories, the wire and cable unit has its own safety organization, which oversees accident prevention, fire prevention and health practice activities.

In good times and bad, they have always had a fire department around to protect the employees and property, and they have achieved a notable record.

Here is a typical example of the so-called smaller factory which cannot support a full time paid department of fire prevention and protection, yet through its accomplishments on a voluntary basis, plus a good selling job to and by management, it has realized a maximum result of efforts along these lines.

Oscar A. Rishe, plant Safety Supervisor, who organized the present plant fire department in 1942 has this to say:

"Every fire department, I suppose whether industrial or otherwise faces the same problems. Anyone in the fire prevention or protection field knows that organization is most important. Why this country has to go on and on reporting such tremendous loss of life and property by fire is beyond my understanding. We seem to have so many people deeply enthusiastic about licking this problem, yet where do we go from year to year? Apparently, we have too many experts around who can't work without gadgets and scientific approaches. Sometimes I find myself heading into this kind of thinking concerning our own activities, but when I consider the fact that the most ultra equipment is kind of useless without the man, it clears the atmosphere a little and we proceed again carefully."

To find out just what is meant by organization and the man, we decided to look the plant fire department over.

The Fire Chief, Fred Guevremont, employed as a mason, thought we would get a pretty good idea if he called a department drill in the form of a real fire alarm.

So, we watched while the Chief used a handy inter-plant telephone and reported a fire in a place he called the mill room, located in the extreme rear of the plant.

We clocked the period before the alarm started, and in about 5 seconds we heard a bell ring insistently, with a sort of urgent command for attention in its rhythm. It rang in single sharp staccato strokes and almost before we realized it, in about 7 more seconds, a very shrill steam whistle sounded in the same pattern.

The Chief said, "Come on, we'll hurry up to the building I reported as on fire, and see what happens there."

We could see bustling activity out of the corner of our eyes as we hurried along, but it appeared to be nothing unusual until we heard a siren wail and heard the roar of a motor coming up the road behind us.

Then the one piece of motorized apparatus passed us. As we approached the end building in a rear quadrangle group, we saw two men dart past us and a long ribbon of hose stretching behind them. One man, in the meantime assumed a position at a yard hose and hydrant house. A fellow in a white shirt went into the building, we later found he was the deputy chief, and in about a half minute came out looking kind of puzzled. When he saw us, he came over to announce, "Well, chief, I don't see anything in there. What's the order?" Following a couple of introductions and explanations, the deputy turned and made a couple of arm signals which started the hose rolling up, and the return of several men to the apparatus with various hand extinguishers, etc. Each man, we noticed, had a different tool or appliance available to cover almost any situation.

As we watched the employees of the mill room file back into their building, and the firemen prepared to return to their jobs, we asked the Chief how all this had been done.

"Well," he said, "Bristol is a small town, about 11,000 that is, and we have a pretty fire-conscious town to start with. The local town fire organization is a volunteer outfit, and has four companies with about 200 active members. Here in the factory we have about 50 of those same volunteers employed regularly. We simply formed our Fire Department around these 50 volunteers, picked up about 20 of them for regular fire assignments and know we can call on the other 30 any time we have a fire. The deputy chief, O. A. Rishe, the Safety Supervisor, set up a training program for our plant firemen, our guard force, our department heads and several auxiliary members and we worked out a comprehensive program

of prevention and protection which satisfies us for the time being, and when it doesn't we change it."

A visit of the plant fire department headquarters was next on our schedule, and there we met the firemen.

There were about 20 men there, representing about every job in the shop from floorman to department head, and like all firemen they were all trying to prove who got there first. The Chief had the apparatus parked out front for an inspection and we found a few startling facts in inspecting the "truck."

These men had taken an old tractor, written off as junk after years of service, and through voluntary efforts had put it back in first class shape.

Every fire truck needs a good pump and here the boys solved the problem by getting management to buy a surplus civilian defense 500 gallon per minute trailer pump. This pump, incidentally, was located at the plant during the war years and the men had fixed it up according to their preference in fire apparatus so that when the equipment was released for sale, they quickly bid in on it and had only minor changes to make in converting it to a piece of plant equipment.

Here again, through the voluntary efforts of the firemen and the factory craftsmen, the trailer pump was enlarged to accommodate hose, and now carries 300 feet of 2½" hose neatly tucked away and in shipshape fashion and 150 feet of 1½" hose with hydrant connections attached and the usual firemen's tools handy. In addition, it carries 5 fire extinguishers, each a different type, with foam, soda and acid, carbon dioxide, dry powder and carbon tetrachloride ready to be picked up for instant use.

The outfit also has its own portable lights, utilizing two small storage battery spots which are on charge in the station all the time, and prevent any blind fire fighting due to lack of lights.

Many other tools are stacked neatly in a tool box built into the front of the trailer pump, bars, wrenches, axes, belts, hose clamps, spanners, straps, etc. Even a first aid kit is included.

The "truck" has seen practically no service in the factory, except for test runs or drills, but at least three times it has gone out into the town on a general alarm call and performed yeoman service in these instances. In fact, the fire department personnel hops to attention and starts moving whenever the town fire alarm sounds and thus keep in good practise all the time.

Thus, in a plant famous for its safety tested wires and cables, many of them fire alarm and signal cables at that, we find that the will to do it is the important factor in good fire prevention.

Hundred of extinguishers spot the plant, it is completely sprinklered and zealously attacks its fire problems with the help of its insurance inspectors and a wide awake crew of firemen, who know it's easier to prevent than to invent excuses.

Talking to these firemen, in a relatively small plant, we got the feeling that these men were all interested in what they could do singly and collectively to get a better safety record. This attitude prevailed too in spite of the fact that the factory had won U.S. Rubber Company recognition for 6 out of 8 years for not having any fires, and in the other two years had reported total damage of about $175.00.

Syracuse Civil Defense Communications Conference

The interest in civil defense and disaster communications was evidenced September 13 at the one-day General Electric Civil Defense Communications Conference held in Electronics Park, Syracuse.

Over 200 leaders in civil defense, including representatives of the nation's fire service, attended the meetings, arranged to bring officials up-to-date on new radio and other scientific and military developments affecting CD work.

The registrants came from 30 states and 70 cities in the United States, from two Canadian Provinces representing 12 cities, and from Venezuela. Among them were 14 top Federal Agency Officials, 22 State C.D. Directors and Assistants, 46 City C.D. Directors and Assistants, 18 City Communications officers, 10 State Communications officers, 13 State and City Police Chiefs, 4 active fire chiefs and a number of retired fire officials, 18 public utility officials, 27 editors and 5 representatives of the military.

The visitors were welcomed by Dr. W.R.G. Baker, G.E. vice-president and general manager, Electronics Division. Paul Chamberlain, G.E. Government and Commercial Equipment Department head introduced the speakers at the sessions, first of whom was Col. William M. Talbot, USAF (Ret.), Director Attack Warning and Communications, Federal Civil Defense Administration. His subject was "Federal Planning and State Systems." Using slides, he detailed the aircraft warning and communications systems and their operation.

Following an intermission for refreshments, the program continued, with a dramatic vignette: "Home Scene" capably acted by professional and GE talent to illustrate what is being done, and not being done, for civil defense on the local level.

"Urban Communications Problems," was the topic discussed by Col. Harvey S. Smith, Onondaga County, N. Y., C.D. Director. He made ten points: (1) In communications, get the best technical advice; (2) Get all the financial help possible (Col. Smith said he had had to put the bite on everybody, and urged the Federal Government to finance State and local aid; (3) Have a balanced radio communication system; (4) Make fullest use of, and organize existing communications systems, fire, police, taxi and others; (5) There must be a suitable communications control center; (6) Don't overdo the communications directives, bulletins, and circulars; (7) He would like a general over-all frequency for C.D. use; (8) More order, and permanency, and less shifting of plans, programs, orders and personnel in Federal and State C.D.; (9) The present radio situation is confused and scrambled; there are too many independent and different systems and no coordination to meet disaster; (10) There is urgent need of training of personnel in radio communication.

L.L. German, G.E. Scientist from Schenectady, N. Y., described the "Radiological Aspects of Civil Defense" with emphasis on the "Monitor Grid Plan." He described a new kind of atomic-age "lamp shade" whereby C.D. and other workers of a community could determine accurately the position of an A-bomb explosion, thus making it easier to detect radio contamination. The device was developed by the Mohawk Association of Scientists and Engineers, a Schenectady, N. Y., civic group, of which Mr. German is a member.

Another dramatic vignette, well acted, illustrated how thinking and planning can be made a reality in C.D. This was followed by an address by Mr. L. W.

Richard Reagan of the New York State Civil Defense Commission points out role of public information in CD planning, as outlined in this display, largest of its kind, which was shown by the commission at the Civil Defense Conference sponsored by the General Electric Company at Electronics Park, Syracuse, N. Y., on September 13. Listening are, left to right, Lloyd J. Jolly, assistant administrator, Federal Civil Defense Administration; James J. Martin, deputy administrator, FCDA; and Dr. W. R. G. Baker, General Electric vice president and general manager of the Electronics Division.

Goosetree, Commercial and Government Equipment Dept. G.E. Co., Syracuse captioned "Communications Equipment Considerations for Civil Defense networks." Mr. Goosetree pointed out there are 20,000 fixed base stations and 190,000 mobile units in the U. S. equipped for civilian two-way radio telephone communication, installed in services like fire, police, utilities, taxicab, etc. Of what use is knowledge of (atomic) radiation and destruction, he said, unless it can be communicated to the organization responsible for handling the problem? He told how the FCC had set aside bands for the various emergency services and described the latest mobile radio communications unit, and other radio facilities, including walkie-talkie or hand-held units and the newest monitor receiver whereby the dispatchers of one radio system can hear the communications of another or can alert key personnel such as volunteer firemen, in their homes if desired. He demonstrated the latest three-light remote control alerting unit, for civil defense. "How can all these different radio units be integrated for disaster communications?" He asked.

One answer was given by N. F. Harmon, Coordinator, C.D. Electronics Division, G.E. Co., Syracuse, with his excellent paper "Designing the Communications System." His theme was further dramatized by another of the theatrical sketches "How Can Thinking and Planning be Turned Into reality" by the theatre group.

Communications Important in C.D.

Mr. Harmon said the important role of communication in civil defense arises from the need of: (1) To gather information; correlate and evaluate it at one or more points by authorities; (2) To instruct proper people based on information gathered; (3) To direct forces at disposal; issue commands, and determine that proper action is being taken; (4) To report action that has been taken and (5) To inform and assure the public.

To make his point he described the efforts of the Onondaga County C.D. authorities to coordinate and make the best use of its many different radio facilities. The answer, as they saw it, was a communication system that utilizes a mobile C. D. communications center containing specially designed two-way radio equipment to permit county C.D. officials to coordinate activities of all the municipal and private agencies already operating their own radio systems. More than 400 radio equipped vehicles in the County are thus made a part of the communications C.D. system, which does not interfere with operation of their own facilities for their own needs, but does coordinate them in time of disaster. Equipment in the mobile C.D. communications center can also serve for any of the individual services should their transmitter facilities be disabled.

Although it resembles an ordinary lampshade, this one has been developed with the aid of General Electric engineers for the grim task of determining the position of an atomic bomb blast. A number of these would be mounted out-of-doors around a possible target area. In the event of an A-bomb blast, heat radiation would scorch the paint on the inside of the lampshade. Brass rod, shown in center, would block radiation, however, and cause a shadow or image of itself on scorched region. By means of numbered and lettered grid lines, the shadow would automatically plot information, from which could be computed quickly the height of the blast and "ground zero," the point directly beneath the blast.

Lunch was served the registrants in the new Electronics Park cafeteria after which the visitors returned to the auditorium to hear Lloyd J. Jolly, Assistant Administrator, Federal Civil Defense Administration and Brig. Gen. Jacob E. Smart, (the latter speaking for Maj. Gen. Frederick H. Smith Jr. who was unable to be present) discuss relations of the Federal and other C.D. offices and the military.

High point of the afternoon session was the first showing of the new March of Time picture: "And a Voice Shall Be Heard" which was photographed in Syracuse, with the aid of that city's Fire Department, Chief Wm. Connelly, and other municipal services, to illustrate how Syracuse civil defense swings into action.

"We must make civil defense a routine and civil duty" emphasized Maj. Gen. Kirke B. Lawton, Deputy Chief Signal Officer, Dept. of the Army, Washington, in his address "It Could Happen to You!"

Following this concluding address, Mr. Chamberlain, as moderator, conducted a question-and-answer period, which was joined in by many speakers in the audience, who posed problems for the panel of experts made up of the program speakers and other officials.

Following an inspection of the new mobile disaster communications unit, the delegates were feted at the Hotel Syracuse in the evening at a banquet, at which the principal speaker was Hanson W. Baldwin, Military Editor, New York Times. Dr. W.R.G. Baker acted as Toastmaster.

The vital role of two-way radio in vehicles such as this Syracuse, N. Y., fire truck, both in peace and war, is pictured by the March of Time in a movie filmed for the General Electric Company. The movie stresses the value of two-way radio communication in everyday life, and portrays the operation of the Onondaga County Civil Defense emergency radio communication system during a simulated attack on the city of Syracuse.

No Spark or Flame in New Explosive

A new kind of blasting agent that is said to emit no flame or spark to set off deadly underground explosions has been under experimental test in Illinois coal mines.

The substance called chemocol, developed by E. I. duPont de Nemours & Co. of Wilmington, if it is proved successful, would prove an important contribution to the coal mining industry.

The new explosive replaces the need for powder charges and other fire-emitting explosives by ripping coal faces apart with a self-generating charge of inert gas approximating 20,000 pounds per square inch.

In the chemicol method, it is said, a rupturing shell, made of steel, two inches in diameter and about six feet long, is filled with ammonium nitrate and other chemicals that decompose rapidly into a harmless gas when set off with an electrical impulse. The shells may be used repeatedly.

August Fire Losses

Estimated fire losses in the United States during August were $55,416,000, it was announced by Lewis A. Vincent, general manager of the National Board of Fire Underwriters.

This is an increase of 11.1 per cent over losses of $49,878,000 reported for August, 1950 and an increase of 6.1 per cent over losses of $52,220,000 reported for July, 1951.

Losses for the eight months of 1951 now total $495,077,000 an increase of 5.3 per cent over the first eight months of 1950.

These estimated losses under fire insurance policies include an allowance for uninsured and unreported losses.

BRIDGEPORT HOSPITAL TRAINS EMPLOYEES IN FIRE PREVENTION

Coached by Bridgeport Fire Department in Firefighting Techniques, and Fire Prevention

By Tom Magner

A nurse sat busily checking medical charts at a ward desk in Bridgeport Hospital, Bridgeport, Conn., a short time ago when a visitor entered the ward. In his hand was a smoking cigarette.

The nurse looked up from her work. "I'm sorry, sir," the woman in white said in a polite tone of voice, "but you are not allowed to smoke in the hospital."

This nurse's action, although it may have been resented by the visitor, was only a part of lessons learned during recent special training classes at Bridgeport Hospital, in a program to make staff members and employes more conscious of the need for hospital fire prevention.

Inside this particular ward, a pneumonia patient in an oxygen tent lay opposite the person the visitor with the cigarette came to see. One spark from the cigarette may have been all that would have been needed to cause a flash fire and a serious disaster.

The fire safety program, which has been augmented by organization of a fire brigade at Bridgeport Hospital, includes training of personnel in firefighting techniques under supervision of the Bridgeport Fire Department; inspection of fire hazards; an evacuation plan for patients, and a special coded alarm system to notify hospital personnel of a fire without causing concern among the patients.

James M. Dunlop, Administrator of Bridgeport Hospital, said members of the fire brigade there would be notified of the exact location of the blaze in case of fire in a broadcast, in pre-arranged code over the hospital's public address system.

Periodic fire drills, in which all hospital employes participate, are conducted at the discretion of the administrator. In these drills, patients are not disturbed, nor are they aware of the drill, since the alarm is sent out in code.

The fire brigade, in addition to conducting intensive inspections for potential fire hazards, makes sure all exit areas are kept clear and that the hospital's 1,000 fire extinguishers and other firefighting equipment are in working order at all times.

With the announcement of the coded fire alert, employes immediately report to their assigned stations. Each employe has a respective assignment. This may be carrying a hose line, or moving a stretcher or bed to an elevator.

Personnel can be maneuvered from one area in the hospital to another by additional coded calls over the PA system. A direct contact with Bridgeport Fire Headquarters also is provided through a fire alarm box located in the telephone switchboard room.

Mr. Dunlop pointed out that as part of the hospital fire safety program, two of the older buildings at the institution have been completely rewired. Both these buildings are equipped with sprinkler systems. The safety program is also affecting student nurses in training. At the hospital's school of nursing dormitories, stringent fire safety rules have been drafted by instructors.

Members of the hospital fire brigade at Bridgeport Hospital, Bridgeport, Conn., discuss an intra-hospital alarm system, which notifies employes of a fire without disturbing the patients. In the photo, left to right, are Archibald Nicholson, Chief; W. W. Haight, E. J. Grace, E. G. Miller, August Wolff, Leo Pachard and Peter Van Diepen.

In an organization of all its resources designed to produce precise efficiency in event of fire, officials at Bridgeport Hospital brief their employees both in fire prevention and fire fighting. The mechanism and functioning of a fire alarm box, which provides direct contact with Bridgeport Fire Headquarters, is explained by Mrs. Beatrice Didsbury (left in photo), staff nurse, to Miss Jean Kimnall, center, student nurse, and to Mrs. Margaret Arsenault, ward aide.

Brighton, N. Y., Gas Blasts Kill 3, Injure Many

An unfortunate combination of events touched off an initial explosion in a street corner manhole and gas regulator vault, resulting in a chain reaction which destroyed 15 homes and seriously damaged 15 others in the fashionable Rochester suburban community of Brighton, on the afternoon of September 21, last, and causing the deaths of three persons, two of them children, and injuries to many others.

The five-pronged investigation of the disaster, which necessitated evacuation of over 2,000 homes and other places, and witnessed the greatest mobilization of fire and other emergency forces ever brought about in the Rochester area, resulted in property damage estimated at from $400,000 to $1 million, may develop the actual cause, but present reports attribute the tragedy to an initial explosion of gas ignited by a lighted warning flare. This explosion blew off a manhole cover, which in turn fell into the hole onto pressure regulators, forcing them into the "open" position sending gas pressure of from five to fifteen pounds into low-pressure household pipes. The high pressure caused gas leakage which was ignited by various means in houses in the area, causing explosions that completely disintegrated some structures, ripped others apart and variously damaged still others, starting fires in many to complete their destruction.

Volunteer firemen from Brighton's station, located not far from the initial explosion were quickly on the scene, but faced a hopeless task from the start. Aid was immediately summoned through the Monroe County Mutual Aid Plan, recently placed in operation, and fire apparatus and other emergency equipment responded at once from some 17 neighboring communities, including Rochester, which sent 17 fire companies in all, as the seriousness of the catastrophe became apparent.

Thick black smoke clouds the area surrounding this demolished home in Brighton, N. Y., after a gas blast leveled its side walls and interior. The home was one of thirty wrecked by a series of gas main explosions.

Gas explosions level homes at Brighton, N. Y. A chain of gas main explosions that touched off a new blast about every minute, September 21, wrecked thirty homes in Brighton, N. Y., a fashionable Rochester suburban community.

Police and firemen ordered immediate evacuation of over 2,000 families. Many acts of heroism were performed as firemen and others risked their lives to evacuate people and shut off gas connections in the area. Fortunately, at this time of the day, with many families out of their homes, children at school, men at work and the fact that at the first explosions many people ran into the street, casualties were held to a minimum. The wisdom of school evacuation drills was demonstrated when students of the Brighton elementary and high schools were dismissed in good order and herded in playgrounds close by the scene of the first blast.

Many persons, including fire fighters, were made ill or overcome by the fumes and smoke. Only three of the injured, however had to remain in hospitals, others being given first aid and discharged.

The fires were for the most part brought under control by the army of fire fighters, about 3:00 P.M., after which search for casualties began, but apparatus stood by for days against the possibility of further explosions.

Petersburg, Va., Service Club Backs Baby Life Saving Bonds

One of the first of the fire chiefs of smaller communities, and the first of any Town in Virginia, to actively promote the sale of Baby Life Saving Bonds, as part of the campaign of the International Association of Fire Chiefs to cut the tragic annual deaths of 4,000 children by fire, is J. N. Farmer, of the Petersburg Fire Department, Petersburg, Va.

In August, Chief Farmer interested his local Lions Club in the movement and arranged for Chief Lawrence M. Bowman, head of the Richmond, Va., Fire Prevention Bureau, to address the club. This he did, following which the members unanimously voted to promote the sale of the Baby Bonds.

Chief Bowman warned that destruction by fire will go on until "every man realizes the seriousness of fires and eliminates carelessness, neglect, indifference and complacency," in regard to fire prevention.

Chief Farmer distributed the baby bonds and urged the members to go out and sell them, rather than merely to contribute one dollar (the price per bond) for them. The sale, incidentally, is being supported by the Lions International.

Probing Jute Sack Fires

Fires in jute factories, often attributed to "spontaneous combustion" may have a different origin; so says "Fire" the Journal of the British fire service. (Sept. 1950).

The British Fire Research Organisation which is conducting research into types of fires, including those in jute, says that fires in jute factories are often started by the rapid spread of almost invisible flames along the small hairs of jute sacks, the actual source of the flames being, perhaps, a discarded cigarette end a considerable distance away. When the flames encounter frayed or loose fabric a smoldering fire starts without the fact being realized.

R. R. Crossing Delay Handicaps Firemen

As far as Paterson, N. J., firemen are concerned, Thursday, July 26th, might just as well have been Friday the 13th, with a couple of black cats and broken mirrors thrown in to boot. Early in the evening of that day, a three alarm fire destroyed a textile finishing plant, causing a series of episodes which was climaxed by the death of one fireman and injuries to three others. At 6:20 P.M., Box 636, 2nd Avenue and East 23rd Street, was pulled, and this is where the story begins.

The fire was in a one story brick and frame mill building at 55-61 First Avenue, in the Riverside section of Paterson, directly across the Passaic River from Fair Lawn. The building was occupied by the Apex Dyeing and Finishing Company, a concern engaged in the dyeing and printing of cotton and rayon acetate goods. The company had occupied the building for about six months. On June 21st, another two alarm fire caused considerable damage to the same building, and temporary repair work had been completed only a short time before the second fire broke out. The plant was not in operation and no one was in the structure when the fire started.

All reports indicate that the fire was through the roof before it was discovered. Whoever discovered the fire pulled Box 636 not once but three times in succession. At 6:20 P.M. the box was struck and Engines 2, 3, 10 and Truck 3, responded. Engine 2, first due, arrived and lined in as did Engine 10, which had a considerable distance to travel to the fire. Engine 3, and Truck 3 however, had to travel over a grade crossing, and both were delayed about four minutes by a passing train. Meanwhile the fire was rapidly eating through the Apex building and threatened the exposed Cambridge Piece Dye Works and Riverside Hotel.

At 6:22, a second alarm was turned in by radio, and at 6:24, a third alarm was ordered. The fire alarm office, however, was unable to transmitt the additional alarms because Box 636 was still banging away on the register. Dispatchers were forced to use telephones to notify Engines 6, 12 and Truck 2, due in the second alarm, and Engines 5 and 13, due on the 3rd.

As the fire spread, several explosions occurred, as flames reached drums of chemicals. The fire also spread to the Riverside Hotel at 81 First Avenue, where the rear of the building caught fire. Across the river in Fair Lawn, two engines and a truck were called out to patrol the 43 acre Fair Lawn Industries plant which was exposed to flying brands. Fair Lawn and Hawthorne volunteer firemen also went across the river to aid their Paterson brothers.

While responding to the second alarm, the car of Acting Chief James Kennedy, driven by Chief's Aid Joseph Dow, was struck by another vehicle at Broadway and Madison Avenue. Both men were thrown from the car by the impact, but Dow's legs caught inside and he was dragged along until the car stopped. Chief Kennedy received head injuries and was treated for shock, then released from the Paterson General Hospital. Dow, however, received a fractured skull and other injuries and died in the hospital three days later. In Chief Kennedy's absence, Deputy Chief Hobart Strathearn took charge of the fire which was brought under control about 7:30 P.M.

The blaze caused over $200,000 damage to the plant, completely destroying the roof and collapsing one wall. The cause is under investigation by the Paterson Fire and Police Departments and the National Board of Fire Underwriters. The fire was also the latest which demonstrated the need for a fire station in the Eastside-Riverside sections of Paterson. At the present time only one engine company is able to respond to these sections without crossing a railroad. City officials have all urged the building of a new station, but some residents persist in their objections, and construction has been held up for over a year.

RICHARD M. ADELMAN.

Accident and Fatality Mar Connecticut Convention

Fire Chief James Grote, of Chester, was elected President of the Connecticut State Firemen's Association at its annual convention which closed a three days' session at Stamford, Conn., on August 18.

Other officers named were Edward Turbert, New Haven, Vice-president; Charles H. Brundage, New Haven, Treasurer; John Moehring, Stamford, Secretary, and the Rev. Michael J. Thompson, Niantic, Chaplain. County Vice-presidents named were Hartford, Patrick Hayes of West Hartford; Fairfield, Harold Gillespie of Stamford; New London, Paul E. Maurice, of Baltic; Tolland, Howard Reynolds of Eagleville; Windham, Joseph Langelier of North Grosvenordale; New Haven, William Casey of Derby; Middlesex, Franklyn Dunn of Middletown and Litchfield, William J. Canty of Burrville.

The death of a parade marcher and two other untoward incidents marred the wind-up of the convention. Walter W. Scott, 65, of Silver Sands Road, East Haven, a member of the Lancroft Drum Corps, collapsed while his unit of the parade on Saturday was passing through Atlantic Square in the center of Stamford. Taken to Stamford Hospital, Scott was pronounced dead.

Also taken to the hospital for treatment was Bernard Fitzsimons, a member of the Bristol Fire Department, retiring President of the Association.

Photo Courtesy of Omaha World-Herald

Almost Beyond the Call of Duty

When disaster threatens, the average citizen has learned to rely upon the Fire Department, which explains the presence of Council Bluffs, Iowa's Fire Department Emergency Unit member Logan Miller at the scene of threatened tragedy illustrated above. A two-and-a-half-year-old youngster fell through one port of a two-holer in Council Bluffs, landing at the bottom of the pit eight feet below. The Fire Department was called, and as usual, where the alarm is promptly transmitted, there was a happy ending. It is reported the boy was quickly handed to his mother after being retrieved.

Fireman Fitzsimons broke his arm when he slipped and fell on a short ladder while descending from the reviewing stand at the end of the three and a half hour parade.

Stamford Central Fire Company had to answer an alarm during the height of the parade, but a hook and ladder truck and two other pieces of apparatus managed to parallel the parade for a block along Elm Street without difficulty. The fire was in a restaurant on Canal Street.

During the business part of the convention the delegates voted to organize "vigilante" groups in the state's communities to prevent illegal lotteries and raffles. The action came after lack of state sanction of games of chance featured in past years at fairs and bazaars conducted by volunteer firemen.

The issue has been a burning one with Connecticut firemen for several years, since a move for strict enforcement of Connecticut's anti-gambling laws started in Fairfield County and spread to other parts of the state. At this year's session of the State Legislature, firemen and other supporters obtained passage of a bill legalizing lotteries, raffles and certain games of chance when conducted by non-profit organizations, but Governor John Lodge vetoed the measure after the Legislature adjourned.

Members of the "Vigilante" Committee include Chief Benjamin Mangels of Rowayton; Asst. Chief George Kelsey of Darien; Henry L. von Wingelo of Norwalk; Norman Logue of Glenbrook, and Scott Bean of East Norwalk.

TOM MAGNER.

Boatyards and Yachts Burn in $1,000,000 Blaze

Fire July 12th, starting with an explosion aboard the 58-ft. pleasure yacht Maquis, laid up for repairs in a shed at the City Island, N. Y., Yacht Basin, Inc., on the east side of the Island, facing Long Island Sound, destroyed six large motor craft, and spread to seven buildings before firemen, responding to five alarms, brought it under control. It is reportedly the first time five-alarms have been struck for a blaze in that area.

Cause of the blast was attributed to ignition of volatile fumes by Fire Marshal Sullivan of the New York Fire Department. The explosions, following in rapid order, spread the fire quickly over an area of 350 x 150 feet. Five frame buildings in the yard were destroyed, including costly motor boats and yachts. The mechanic who was working on the cruiser in which the fire developed was seriously burned.

After involving the Maquis, flames reached the wooden roof of the shed, of cinderblock and steel girder construction. A strong wind carried the fire to buildings of the Consolidated Shipbuilding Corp. and threatened nearby houses on Marine street, a dozen of which were evacuated by police. Six buildings of 20 on Consolidated property, which covers a block of waterfront north of the boatyard, were damaged.

The pumper of Engine 70, whose quarters are only a few blocks away, and which hooked up to the nearest hydrant, was so exposed that it later had to be abandoned when heat blistered its side and ruined two tires.

The water supply feeding City Island, which is a typical main street summer time fishing and boating hamlet, is hardly up to supplying five-alarm assignments of pumpers, and as pumpers rolled in on succeeding alarms and hooked to hydrants pressure dropped to four pounds, and Deputy Chief Powers, in charge of operations, ordered all pumping engines to use fireboat water, from the fireboat Willett from Hell Gate which arrived with Chief Carlen of the Marine Division in charge.

Chief Carlen stretched two 3½-in. lines from the boat, which were fanned out at the bulkhead into six 2½-in. lines, which did effective work on the fire.

Chronology of alarms was as follows:

1:30 P.M. Box 4557, City Island ave. and Pilot st.: Engine 70 (second section; E. 70 operates as a double company in summer), 97; Ladder 53,50; Act. Batt. Chf. Neissner, 20th Batt. Numerous telephone alarms.

1:26 P.M. Second alarm: Engs. 89, 38, 64; L. 51; Act. Dep. Chf. Pilner. Div. 7. Locating: E. 71/89; E. 73/64; L. 32/51.

1:36 P.M. Third alarm: Engs. 90, 62, 88; Rescue 3; L. 47; Chief Nugent 18th Batt. Locating: E. 43/62; E. 80/43; E. 59/73; E. 76/59; L. 48/47. Chief Petronelli in Charge Manhattan and Bronx, Dr. Archer and Dr. Finestone with Ambulance 1; Canteen No. 9 with the "Third Alarmers" and "refreshments."

1:51 P.M. Fourth alarm: Engs. 45, 48, 79. No ladder. Locating: E. 41/45; E. 91/45; E. 47/80. No ladder. Fire Chief Powers in charge of department; Fire Commissioner Horowitz; Dep. Chief Fire Marshal Gribbon and Asst. Marshals Washington and Sullivan; Chaplain Farley; Chief Thomas O'Brien in charge, Bureau of Fire Alarm Telegraph; members of the Fire Bell Club and other buffs organizations.

1:55 P.M. Special call, Fireboat Willett with Chief Carlen.

2:02 P.M. Fifth alarm: Engs. 75, 46, 82; no ladder. Locating: E. 67/75, 83/82; E. 35/83. No ladder truck changes.

Total: 15 pumpers, 4 ladders, one rescue and one fireboat.

The fire drew many city officials, including Commissioner George Monaghan, who only three days before had become head of the Police Department.

Overall view of City Island 5-alarm, $1 million fire.

Fire fighters gain control of fast spreading blaze that destroyed seven buildings and six yachts, following an explosion. Fireboat Willett, which supplied six effective streams, worked at end of long dock. Coast guard cutters also aided.

Ontario Plans Standardization

Col. Arthur Welsh and the Hon. Paul Martin, Ontario Defense Administrator, have announced that a program to standardize the hose couplings over the entire Province of Ontario, Canada, to cost $300,000, will soon start as part of the Province's civil defense program. The grant for the operation is part of the funds set aside by the Federal Government to faciliate mutual assistance to firefighting between the provinces and the municipalities. The Federal Government has established a fund of $900,000.00 to aid in the standardization program of hose couplings across Canada.

Col. Walsh stated the civil defense planners have long recognized the great importance of the fire fighting services in the event of an emergency and they have consistently recommended uniformity of all equipment as well as close integration of services among the municipalities. He also said the Ontario Government would let a contract for the manufacture of a standard hose coupling which would be supplied to the municipalities free of cost.

The standardization decided upon will be on a basis of five threads to an inch on couplings. At the present time there is over 100 non-interchangeable fire departments thread standards in the Province and it is planned to supply adaptors which will bring about the complete standardization.

The City of Toronto already has the standard that has been recommended for the entire Province. Col. Welsh said municipalities would be expected to have their own fire departments make the necessary installation on the hydrants. The Province of Ontario expects to have four trucks on the road to assist in installing couplings where trained labor is not available.

J. K. LEE

Manufacturers' Announcements

Ward Grantham Joins Gamewell

Ward Grantham was recently elected Vice-President and General Manager of The Gamewell Company, Newton Upper Falls, Mass.

Ward Grantham

He was born in Georgia, October 5, 1908, and is a graduate of George Tech, Class of 1930, B. S. in E. E. He is a member of Phi Kappa Phi, Tau Beta Pi, and Alpha Tau Omega and is also a member of Apawamis Club and Shenorock Shore Club, both of Rye, New York.

He has formerly been associated with Westinghouse Electric Corporation, P. R. Mallory & Co., Inc., Nathan Manufacturing Co., and Jerome Barnum Associates.

Resignations of Fred B. Philbrick, President and General Manager, and E. J. McCarthy, General Sales Manager, were recently announced.

Roy Pulver Opens Michigan Fire Equipment Company

Roy G. Pulver has organized the Michigan Fire Equipment Co., with headquarters in Lansing, Michigan, to represent fire apparatus and equipment manufacturers of the nation in a distribution capacity.

Mr. Pulver, who has enjoyed not only wide recognition by the fire service, and those allied with it, was formerly manager of the fire truck division of a large Michigan corporation. Later he occupied an important post connected with state civil defense. He has been a student of fire control and protection for over a decade and has assisted in the development of fire fighting ideas and equipment, particularly the application of high pressure fog. He has also been active in firemanship training.

Mr. Pulvers' organization, of which he is president and general manager, will distribute "everything for the fire department." The address is P.O. Box 751, 200 Dawn Ave., Lansing, Mich.

Ahrens-Fox Company Changes Hands

Announcement has been made that on August 1, Walter Walkenhorst, of Cincinnati, purchased the "entire interests" of the Ahrens-Fox Fire Engine Company, one of the pioneers in the building of fire apparatus.

Mr. Walkenhorst is President of the General Truck Sales Corporation of Cincinnati, one of the large sales branches of General Motors Corporation, with which he became identified in 1908. It is of interest to note that nearly fifty years ago, he worked for the Ahrens-Fox Company.

Ahrens-Fox traces its origin back to Alexander Latta, who developed the first successful steam fire engine in 1852. Chris Ahrens acquired the business from Lane and Bodley in 1868, and established the Ahrens-Fox Fire Engine Company in 1905.

One important policy of the new company will be the manufacture of fire apparatus "constructed for use on commercial truck chassis." Piston and centrifugal pumps will be revamped for use on such chassis.

It is also planned to conduct distribution and sales service on a world-wide scale.

Mr. Walkenhorst intends to stress prompt and efficient service. Air express will be employed, where necessary, to insure quick delivery of parts needed for replacement.

Canvas Water Tanks for Fire Fighting

Lack of water at the scene of a forest or rural fire, one of the big problems faced by the fire fighters, has been partially solved with the recent introduction of a new type canvas water tank.

The tank called Harodikes was invented by Franklin E. Smith, a South Dartmouth, Mass., textile engineer, when he was "marooned" in England during the London "blitz". When the German Luftwaffe destroyed London's water mains and water supplies, Civil Defense experts sought some suitable auxiliary supply. Smith, among others, was called on for some solution to the problem.

Mr. Smith, who taught at the New Bedford Textile Institute, developed, and later patented, a simple system of making canvas hose, a hose coupling of rubber to replace scarce metals, and also dikes to provide a reservoir supply of water.

The Harodikes tank has been in experimental use by forest protection agencies in this country for the past year and is said to have met the rigid requirements of forest fire fighters. The dike, or tank, has proved its usefulness especially in areas where irregular terrain and dense underbrush prevent the entrance of motorized tankers.

The tanks, or dikes, are available in three standard sizes, 150, 300, and 600 gallon capacities. The 150-gallon dikes have a square base of 48" and have been designed so that they can be loaded in pairs on the usual utility pick-up truck which is standard equipment at most fire-fighting stations and carried full to the fire site. In similar manner, two of the larger tanks can be transported to the scene of the fire on an ordinary flat-bed truck.

The tanks have a low center of gravity. Even when carried fully loaded on trucks moving at reasonable speeds, the tanks do not throw the vehicles off balance nor do they shift excessively.

The tanks are completely collapsible, and when empty are light enough to be carried as back-packs. The 300 gallon tank, for example, folds into a compact unit 13"x28"x17" and weighs only 24 pounds.

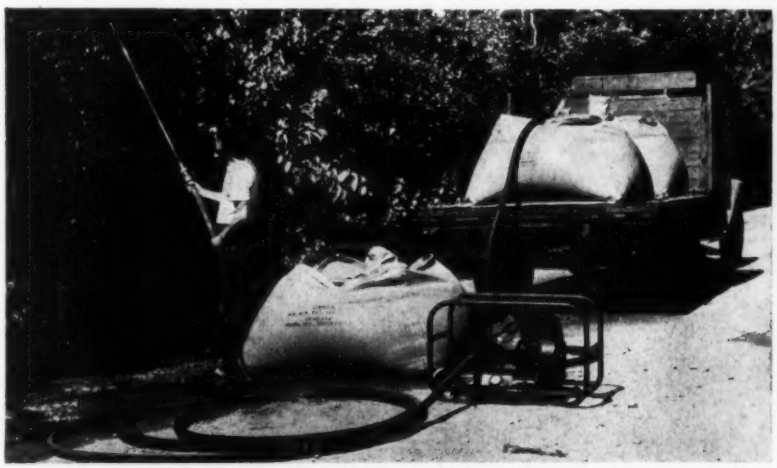
In tests conducted by fire fighting agencies, Harodikes tanks have been found to be valuable when used in a series for a relay pumping operation. The tanks can be dropped at any interval of distance along the path of fire-fighting use, and because of their unique construction filling and either pumping or siphoning can be maintained from one "dike" or tank to another through as many series of hoses as may be desired.

New Bulletin on Mechanical Foam for Polar Solvent Fires

AER-O-FOAM "99", a new liquid type mechanical foam for extinguishing polar solvent or petroleum products fires is described in detail in a new bulletin published by National Foam System, Inc., West Chester, Pa.

The bulletin tells how this new mechanical foam, developed after extensive research, offers dependable protection when applied to fires fueled by methyl, ethyl, isopropyl alcohols, esters, ketones and ethers. AER-O-FOAM "99" is reported equally effective on petroleum products fires, offering a new measure of fire safety to a wide range of industries vitally concerned with fire protection problems.

(*Continued on page* 864)

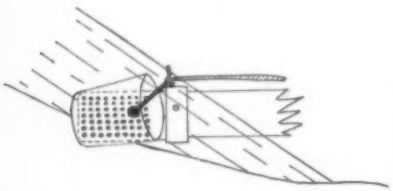


Newly developed canvas water tanks.

Short Cuts and Gadgets

PREVENT FOULING OF SUCTION STRAINER

There have been numerous expedients devised to overcome the fouling up of pumper suction strainers which so frequently happens when drafting from shallow water. That described and pictured here by contributor Henry T. Hanson is not new but is worth passing along to our readers as a reminder.



Brother Hanson writes: "Some time ago I noted a method you described in your column to prevent the fouling of the suction strainer when drafting from a shallow muddy source of water. (The method described called for supporting the lower suction section and strainer on a short ladder stretching out from the water's edge). The method is very good if a ladder can be spared for the purpose but as this problem usually arises in rural communities, the only ladders available are the ones carried on the pumpers, which are probably needed at the fire. A method that has proved successful many times is to tie a rope to the handle of a pail and place the pail over the strainer," contributor Hanson adds: "of course a flat box type strainer is the best solution of all."

* * *

REAR-STEP PUMP ON TANKER-PUMPER

Conscious of the importance of carrying sufficient water in pumping apparatus to make the strongest and most immediate possible attack on fire, volunteer fire fighters have been coming up with some original developments in apparatus for this kind of fire fighting.

Among these enterprising volunteers are members of the Blackhawk Fire Fighters Association of western Illinois. One of the members of this Association, the Milledgeville, Ill., Fire Department, has designed and built the unit shown in the accompanying illustration.

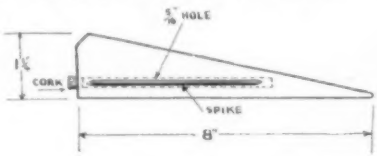
This tanker-pumper carries 1,100 gallons of water, a supply of 1½-in. and smaller booster hase so connected with the portable pump mounted on the rear running board of the unit that water can be delivered either through the booster or the larger hose.

The pump itself is so installed that it can quickly be detached for operation elsewhere such as drafting from a pond or shallow stream, as desired.

* * *

NEW SLANT ON AN OLD IDEA

In one of the first editions of "Short Cuts & Gadgets," we published an idea for a double pointed 'spike' that could be carried by firemen as a handy 'tool' for propping back doors, holding up windows, etc. We told about a simple wood wedge that is used by numerous fire fighters for wedging back doors, plugging sprinklers and other tasks.



One of our old contributors, Chief Jim Thompson of Irvington, N. J., since retired, wrote us that he saw our wedge and double-ended spike idea in the December, 1944, issue of Fire Engineering and it led him to offer a suggestion he picked up in Richmond, Va., while 'touring' with the Navy. That is a combination of both, which makes it a fine 'gadget'.

The spike is also safer inside the wedge, as show in the sketch he claims, and by making the wedge 8 inches long it can serve as a good emergency sprinkler plug.

Jim winds up by saying "I think "Short Cuts & Gadgets", is a good addition to Fire Engineering and I'm sure you will be flooded with Short Cuts that have been developed in the fire service."

Wherever you are Jim, we're sure you'll be reading this, and be glad to know your belated contribution has found expression. However, to our other readers we say there is plenty of room for more suggestion and ideas, for which we gladly pay. (The Editors.)

Milledgeville Tanker-Pumper

"PERSONALIZING" GAS MASKS

Here's an idea that our industrial fire protection readers as well as many fire officers can profit by. It comes from the West Virginia Pulp & Paper Company Tyronne, Penn., mill, via one of our contributors.

Mills such as this are extensive users of gas masks, particularly the all-service, canister type. In the Westvaco mill the users complained about having to adjust their masks every time they used them. It seems the workers did not have their own individual masks.

In order to overcome this handicap electrolytic-cell workers in the chlorine plant now are each given their own individual mask and this is kept when not in use in a small glass-fronted cabinet, with the name of the user printed in large letters below the door.

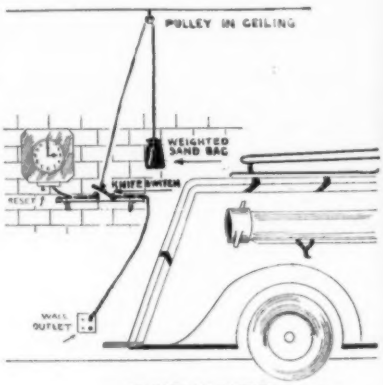
To remove the mask from the cabinet and don it takes but a moment and no time is lost in having to adjust the straps. These masks are equipped with speaking diaphragms.

* * *

ANOTHER TIME RECORDER

One of the problems of response is to accurately record the exact time a piece of apparatus leaves the fire house. Leaving it to the man on watch, or the driver, or officer in charge of the apparatus, isn't always the best policy when they may be engaged in the business of getting out and away.

A number of ideas have been evolved to help simplify this problem. Here is one submitted by H. A. Shouse, Asst. Chief, No. 2 Fire Station, Steubenville, O., some time ago.



Chief Shouse's idea calls for a shelf, on which is located a simple knife switch which makes an electrical connection with the electric clock. To the knife switch is attached a line running up over a pulley in the ceiling and down, with a weighted sand bag on its end.

In operation, the little sand bag is placed on the highest part of the apparatus (on the body, or cab, ladder or chassis.) When the apparatus pulls out, the weight drops, and the weighted line opens the jacknife switch, thus stopping the clock "for the record."

Years ago before electric clocks, and in the horse era, a similar trip was used to record the recept of the alarm in the fire station. This did not record the moment the apparatus pulled out, but only when the alarm circuit was opened. It is still in use in many departments.

For high-pressure work...

When your lines are stretched and the streams tear into the blaze—pressure is vital. That's when you can depend on Eureka, the hose that will not "washboard." Four of Eureka's big advantages are—

BALANCED-WEAVE CONSTRUCTION, in both multiple-woven and double-jacket hose, eliminates dangerous writhing and twisting under high pressures.

SMOOTH-INTERIOR FILLER PLY prevents "washboarding" of rubber lining, reduces friction loss so that you get better nozzle pressure without increase in pump pressure.

MILDEW-PROOFING: Double-jacket hose can be furnished antiseptically treated or wax and gum treated to prevent mildew and rot.

BOMB-TESTED RUBBER LINING to guarantee longer wear.

EUREKA

"For greater protection to life and property"

EUREKA FIRE HOSE

Since 1875, Specialists in Manufacturing Circular-Woven Cotton Rubber-Lined Fire Hose

195 Hudson Street • New York 13, N. Y.

Division of United States Rubber Company

FALSE ALARMS

Hard to Teach

One of our Senators visited President Truman at Blair House recently and the President took great pride in showing the home's beautiful gardens. He expounded at great length on the flourishing flower beds.

"These tulips are so big," said the President, "because we put a half load of manure on them. The iris have had one load of manure and will get another one next week. Under the rose bushes, we spread two loads of manure."

At this point, the President was called into the house and the Senator was left with Mrs. Truman. The Senator said:

"The President is certainly proud of his gardens, but couldn't you get him to refer to plant food as fertilizer instead of manure."

"Now don't get started on that," said Bess, "you should know the time I've had getting him to say manure!"

FROM HEIL "SALES BOOSTER".

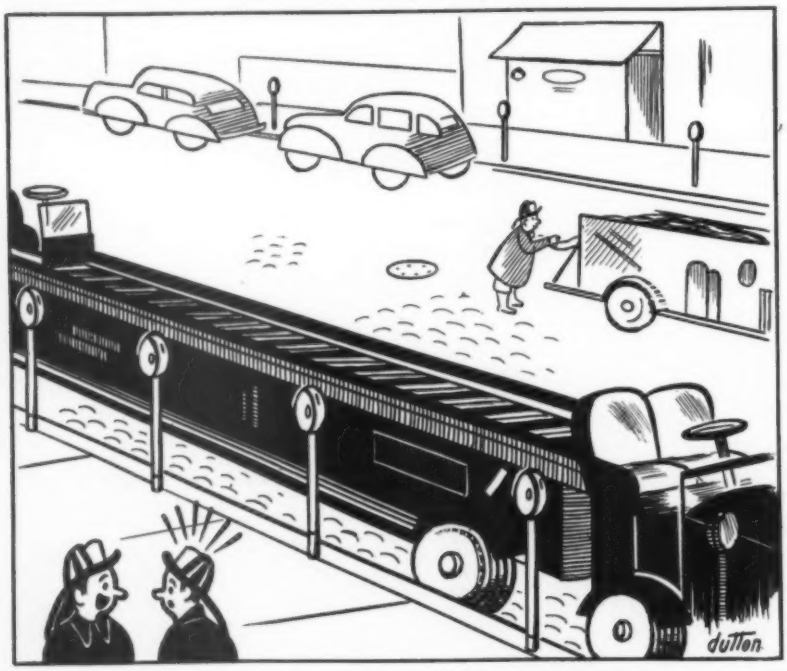
"Bringing a bit of the Old West to the East," was the slogan of a new night club which had just opened up on entertainment row in the big city. It featured Cowboys, Cowgirls, the best Western foods and wide open spaces decor. Among the patrons were a young couple. They were there a short time when the girl arose and excused herself to go have her face made up. She returned a moment later, her countenance a blushing red.

"Darling," she said, "you'll have to help me a little. Am I a heifer or a steer?"

"Would You Put This One Aside for Me Until You Run Your Fire Sale!"

"And now, gentlemen," continued the congressman, "I wish to tax your memory."

"Good heavens," muttered a colleague, "why haven't we thought of that before?"



"Imagine Our Bill If We Had to Pay Parking Meter Charges!"

She was "Honey Chile" in New Orleans,
The hot spot of the bunch;
But on the old expense account
She was gas, cigars and lunch.

You can't put an old head on young shoulders. The girls won't let you.

A man appeared in a newspaper office to place an ad offering $100 for the return of his wife's pet cat.

"That's an awful high price for a cat," the clerk suggested.

"Not for this one," said the man. "I drowned it."

It's love when she sinks in his arms and ends up with her arms in the sink.

Judge: "What were you doing in that place when it was raided?"

Locksmith: "I was making a bolt for the door."

EVOLUTION OF GLAMOUR GIRL
From pigtails to cocktails.

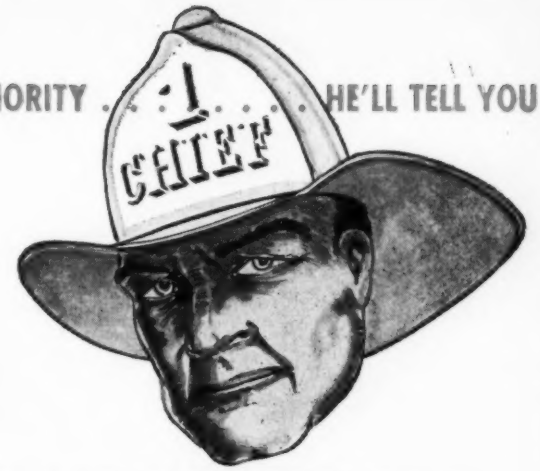
Quite a Spell!

Said the young jester, "First I got tonsilitis, then appendicitis and pneumonia. After that I got erysipelas with hemochromatosis. Following that, I got poliomyelitis, and finally ended up with hypodermics and inoculations. I certainly thought I never would get through that spelling test!"

Jack and Jill fell down the hill,
A stunt that's very risky.
If water made the act like that,
I think I'll stick to whiskey.

ASK ANY QUALIFIED AND IMPARTIAL AUTHORITY . . . HE'LL TELL YOU

YOUR *BEST* PROTECTION



FOR FLAMMABLE LIQUID . . . GAS AND ELECTRICAL FIRES . . .

ANSUL DRY CHEMICAL FIRE EXTINGUISHING EQUIPMENT

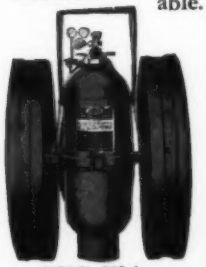
MODEL 4

MODEL 4-B

MODEL 30-B

MODEL 20-B

MODEL 150-A


MODEL 350-A

MODEL J1-340

You, who have seen or used an Ansul Dry Chemical Extinguisher at a fire demonstration or on an actual fire, quickly recognized its superior fire-fighting capabilities. Further investigation proves that Ansul "Water-tight Construction" provides greater dependability under severe exposure conditions.

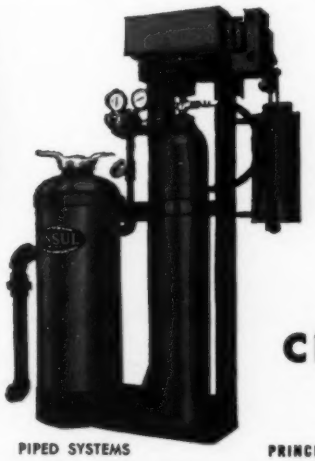
Fire Chiefs, insurance inspectors, safety engineers, etc. recognize Ansul as the leader in the dry chemical fire extinguisher field. Ansul Fire Extinguishing Equipment and *"PLUS-FIFTY"* Dry Chemical have set unparalleled standards of quality for the fire extinguisher industry.

You get *complete* dry chemical fire protection only from Ansul. There is an Ansul Dry Chemical Fire Extinguisher of the proper size for almost every flammable liquid, gas and electrical fire hazard.

Safeguard your plant and irreplaceable equipment with the *BEST* fire extinguishing equipment available. Protect them with ANSUL EXTINGUISHERS.

ANSUL EXCLUSIVE FEATURES

- Patented Nozzle assures most effective stream pattern . . . Best results by inexperienced operators.
- Special packings in Nozzle and other parts exclude water.
- Corrosion resistant construction throughout.
- Easy on-the-spot Recharging (No tools needed).
- Quick, *positive* puncture operation.
- Special guard protects cartridge . . . rugged construction throughout.
- Ansul *"PLUS-FIFTY"*® Dry Chemical used exclusively.
- Field tested by thousands of satisfied customers.
- Ansul LT Models are the only dry chemical extinguishers listed by U.L. for operation at –65° F.


PIPED SYSTEMS

Send for File No. 714. You will receive a variety of helpful printed matter. Included is our latest catalog which describes Ansul Extinguishers of all sizes — from the small Ansul Model 4 to Ansul Piped Systems and Ansul 2000 lb. Stationary Units.

ANSUL CHEMICAL COMPANY

FIRE EXTINGUISHER DIVISION
MARINETTE • WISCONSIN

DISTRIBUTORS IN ALL PRINCIPAL CITIES IN THE U. S. A., CANADA AND OTHER COUNTRIES

MANUFACTURERS OF INDUSTRIAL CHEMICALS • REFRIGERANTS AND REFRIGERATION PRODUCTS • DRY CHEMICAL FIRE EXTINGUISHERS

"WE USE Scott Air-Pak because:

— it helps us to

- Protect lives
- Reduce property losses
- Improve department efficiency

RESULT: an outstanding safety record"

Write for full details on Scott *Air-Pak* Safety Breathing Equipment in *Bulletin* 510

ESTABLISHED IN 1932 Scott FOR SAFETY—FOR SERVICE

SAFETY EQUIPMENT DIVISION
SCOTT AVIATION CORP.
215 ERIE ST. LANCASTER, N. Y.
CANADA: SAFETY SUPPLY CO. BRANCHES IN ALL PRINCIPAL CITIES
EXPORT: SOUTHERN OXYGEN CO., 157 Chambers St., New York 7, N. Y.

Armory Fire

(*Continued from page* 823)

uted to asphyxiation and burns.

Fire Chief William Thomas, arriving on the multiple alarms, quickly sized up the situation and the hazard to the area. He placed aerial ladders at the Washington street entrance and in the rear of the structure on Water street. The Johnson City aerial was stationed in a driveway separating the old Armory from the Knights of Columbus clubhouse on the north. Pouring tons of water into the structure from the east, west and south sides, firemen worked their way down the south side of the building through a 15-foot alley-way separating it from the brick office building of the New York Department of Labor, another exposure.

Shortly, flames drove fire fighters from their ladder positions but there was no further retreat. Heavy streams were operated from the roof of the Labor Department building, which had several windows broken by the heat. At one time fire communicated to the northwest corner of the roof of this building but this was promptly extinguished.

An explosion at the Water street rear of the Armory about 5:35 A.M. collapsed the rear roofing and part of the northwest wall of the building. As fire fighters quickly withdrew, a 50-foot aluminum ladder which earlier had been extended against the building, buckled under the weight of falling masonry. No fireman was caught however, but the ladder wss ruined for further use as an extension ladder. Incidentally, this same ladder had undergone injury at another fire about a year before.

Windows in some establishments across the streets were broken by the blast but firemen prevented extension of any blaze in this direction. Soon after, the south wall of the institute collapsed, breaking some windows in the nearby Southern Tier Electrical Co. building.

Although the blaze was considered controlled at 7:30 A.M., a reduced force of firemen continued to fight persistent outcroppings of fire throughout the day.

The seven firemen injured during the fire were: William Buckley; George Sedor; Stanley Matson; Armand Mariano; John Conomikes; Charles Jenks, and Martin O'Shea.

Fire Marshal Gerald O'Loughlin attributed the cause of the fire to a short circuit in an electric vending machine located in the wood semi-balcony in the auditorium. The fire evidently had been burning for some time before discovery.

The loss, originally estimated at about $1 million, was reduced after it was found the damage to exposed structures, and to contents of the institute, were not as great as believed.

Mutual Aid Proves Itself

According to Chief William Thomas, the fire more than demonstrated the effectiveness of the Broome County mutual aid plan, instituted as a part of the New York State mutual aid program in 1950.

As Binghamton and neighboring fire forces converged on the threatening fire, County Fire Coordinator Ernest S. Young moved some ten fire departments to change locations in order to protect uncovered areas.

Engine No. 1 of Johnson City, with

SPECIAL FIRE SYSTEMS, DESIGNED TO OUT-PERFORM, BUILT TO OUT-LAST

Reliability— in a tough package

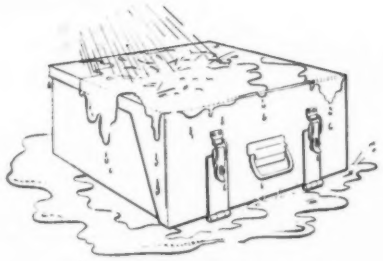
WITH MOTOROLA'S SUPERIOR-PERFORMING, PERMANENT-SELECTIVITY, SENSICON CIRCUIT

Fighting fire the modern way requires the plus-performance, locked adjustment efficiency of Motorola Special Fire Equipment. There's 2-way radio you can put through the toughest battles and come up ready for the next call. That's why Motorola is the four to one favorite for fire departments everywhere.

The marvelous Sensicon Circuit, Permakay Wave filter, and seven other exclusive Motorola developments guarantee you better on-the-job performance that stays better year in and year out.

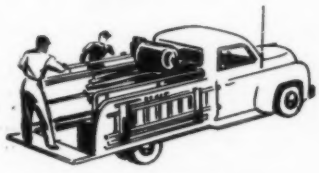
The Specialists in Fire Department Radio Communications

Motorola 4545 Augusta Blvd., Chicago 51



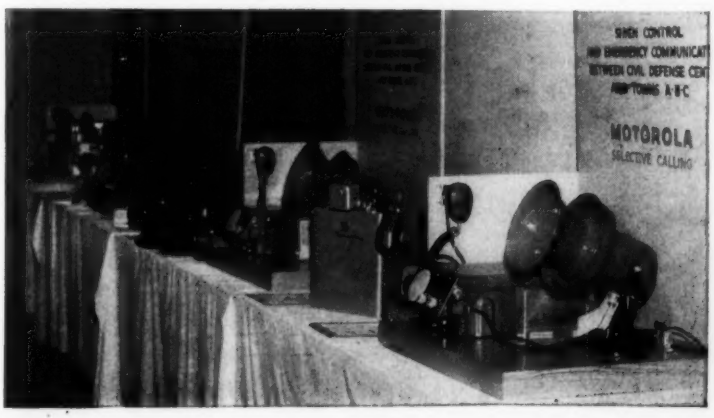
WATER-PROOF HOUSING

DESIGNED FROM THE GROUND UP FOR THE FIRE SERVICES



ON THE JOB EFFICIENCY

CIVIL DEFENSE—See how the famous Uni-channel is teamed up with the CIVIL DEFENSE alerting siren.



Knowing all this, could you honestly accept anything but Blackinton Badges?

1. EXPERT DIE WORK

Look closely at the die impression of a Blackinton Badge — see how the characters are clean-cut and sharp. Here is definite proof the die cutting is the work of experts.

2. LONG LASTING MIRROR FINISH

Looking at the finish of a Blackinton Badge is like looking in a mirror. And there is more to the finish than you see on the surface. Blackinton finishes are not just skin deep.

3. SMOOTH HARD ENAMEL

Blackinton Badges decorated with hard enamel have a quality that cannot be matched. Hard enamel fills the recesses flush with the top of the metal, giving a smart looking, permanent finish.

4. PRECISE LETTERING

Look carefully at the lettering of a Blackinton Badge. You can easily see it's the work of experts. Every letter is carefully formed by workers with years of badge experience.

5. CUSTOM DESIGN SERVICE

Blackinton's creative badge designers are prepared to submit sketches of special designs. Why not take advantage of this custom service — Ask your Blackinton badge supplier for the full details.

BLACKINTON
V. H. BLACKINTON & CO., INC., ATTLEBORO FALLS, MASS

BADGES *for Police, Fire, Town, City, County and State Officials; also Civilian Defense, Plant Protection, and Junior Police.*

five men, was dispatched to the fire at 4:57 A.M.; Binghamton State Hospital's apparatus was located at Binghamton's Central Fire Station in Carroll street, arriving there at 4:58 A.M. The Port Dickinson Volunteer Fire Department reported to the North Side Station, remaining there until late in the afternoon. Some of its firemen went to the fire to aid in the operations on Water street, Chief Donald Rodman reported.

At 4:49 A.M. Members of the Hinman Corners Volunteer Fire Department were sent to the Binghamton Central Station to help cover the business area. One unit from the Chenango Bridge Volunteer Fire Department moved into the Port Dickinson Fire Department's station in Upper Chenango street, and a unit from the Endwell Volunteer Fire Department was dispatched to the Binghamton West Side station to meet emergencies there. To protect the State Hospital, part of the Five Mile Point Fire Department was requested to fill in at that institution. One unit from the Vestal Volunteer Fire Department, of nearby Vestal, covered-in at the Johnson City Headquarters to take the place of equipment sent to the fire.

One piece from the Conklin Volunteer Fire Department moved into the vacated quarters of the Binghamton Conklin avenue station. Volunteer firemen, said to number 100, were called in from outlying sections. Five men were reported sent from Port Dickinson; four from Choconut Center Volunteer Department (which was also alerted in the Endicott area); five from Hillcrest, and scores from other areas. Meanwhile, the county coordinator sent alert messages by radio to Kirkwood Fire Department; Port Crane Fire Department and one section of the Hinman's Corners Fire Department.

Volunteer Department Rewarded

A check in the amount of $350, awarded to the volunteer fire department by the Hartford Mutual Life Insurance Company at the Connecticut State Firemen's Association convention at Stamford, was presented to Fire Chief Arthur A. Bush and the Department president, Alexander A. Jaffe, of the Easton, Conn., Volunteer Fire Department, on September 10.

The check, first prize in Class Four, of which the Easton Department is a member, namely, those companies which have some financial assistance from their town and at least one or more paid firemen, was won on the basis of fire prevention activities.

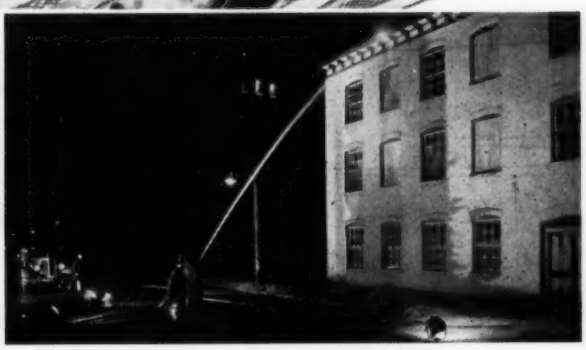
In judging the companies the following points were considered: fire protection and prevention; training personnel in firefighting and prevention; improvement in equipment; types of alarm systems; improvement in water supply facilities; availability of volunteers in responding to fire calls; proper maintenance and supervision of equipment and fire house, and correct contest record reports.

The Easton Department won their greatest number of points on their training system and the number of fire drills they have. They were also commended for their merit system which was explained at the convention in Stanford by Mr. Tucker, so that other companies might put it into practice.

TOM MAGNER.

It Pays Double to Standardize on HOMELITE *Carryable* EQUIPMENT

Homelite Carryable Pumps
for fastest automatic pumping on all types of dewatering jobs



Homelite Carryable Generators
for instant, dependable power, for floodlights or electric tools

Indeed it does! In the first place when you standardize on Homelite Pumps and Generators you give your men the best. Easy to operate, *sure* to operate, they're all powered by the famous Homelite built-in gasoline engine . . . a dependable, weather-proof, dustproof, foolproof engine that assures best performance at all times.

What's more, when you standardize on Homelite equipment you cut your maintenance problems to the minimum. Your nearby Homelite field service branch, completely stocked with standard Homelite parts can keep your units in perfect shape always *and economically.*

Homelite Factory Branches
throughout the country bring service right to your door

Manufacturers of Homelite
Carryable Pumps • Generators
Blowers • Chain Saws

PERFORMANCE · DEPENDABILITY · SERVICE

HOMELITE
CORPORATION
310 RIVERDALE AVENUE • PORT CHESTER, N. Y.

OFFICIAL BADGE

Actual Size No. 5822

AND

BUTTON

Actual Size No. 7414

OF YOUR ASSOCIATION

Wear One!

No. 5822
Rolled Gold $8.50–14 Kt. Gold $55.00

No. 7414
Rolled Gold $1.00–14 Kt. Gold $3.50
Plus 20% Federal Tax

Satisfaction or money refunded.

BRAXMAR BADGES

Standard since 1879

JOHN O. VEIT
President

C. G. BRAXMAR CO., Inc.
216 E. 45th Street, New York 17, N. Y.

Persons in the News

Chief Roy Alsip of Champaign, Illinois, Retires

Roy W. Alsip, for 11 years chief of the Champaign, Ill., Fire Department, and a member of that organization since he was 17 years of age, retired September 1, 1951.

The community he has served for 45 years paid him tribute on Aug. 28 at a dinner attended by 225 notables, including fellow firemen from throughout the area, many of whom participated with Chief Alsip in establishing the Illinois Fire College, in 1925. Mayor Virgil F. Lafferty of Champaign presented the retiring chief with a gold badge and commission as "ex-officio fire chief," the first honorary award of its nature ever made in the department.

Gifts presented to help the chief enjoy his retirement included: an all-expense trip to the Illinois-Washington football game, in Seattle, Oct. 20, given by local businessmen; binoculars to watch the game, presented by the Elks; a men's store gift certificate, from the Moose Lodge; a placque praising his service, from the Junior Chamber of Commerce; a fountain pen desk set from the Chamber of Commerce; and a complete fishing outfit from "his old buddies." Earlier, the chief's firemen had given him a watch. A red carnation also arrived from the "kids and dogs of his neighborhood."

Orchestra Conductor Made Honorary Chief of S.F.F.D.

Fire Department Headquarters in San Francisco's City Hall was the scene of a colorful ceremony on Wednesday, September 5th, at which Arthur Fiedler, the distinguished conductor of the Boston "Pops" Orchestra, was appointed an Honorary Chief of the San Francisco Fire Department.

Honorable Robert H. Schaefer, President of the Board of Fire Commissioners, officially inducted Mr. Fiedler into the fire service of the city and presented him with his badge of office. Assisting Commissioner Schaefer were his fellow Commissioners, Leo H. Shapiro and Walter A. Leonetti, and Chief of Department Edward P. Walsh. The new Honorary Chief was given a set of Rules and Regulations of the Department and Commissioner Schaefer cautioned him to study them with diligence.

Many friends of the new Honorary Chief witnessed the event, including representatives of the various art and music associations, also members of the Phoenix Society, the local "buff" organization with which he always maintains close contact while in San Francisco.

Like all true "buffs," the Fiedlers, and this includes his charming wife who proudly carries her own Boston Fire Department badge, are ready to respond, and do respond to multiple alarm fires at any time of day or night.

Chief Edward P. Walsh has accorded Mr. Fiedler all courtesies during his visits to San Francisco where he has conducted a series of summer concerts. Typical of Mr. Fielder's interest in the Fire Department was his attendance at a recent dedication of a new firehouse, during which he guest-conducted the Municipal Band which had been assembled for the event.

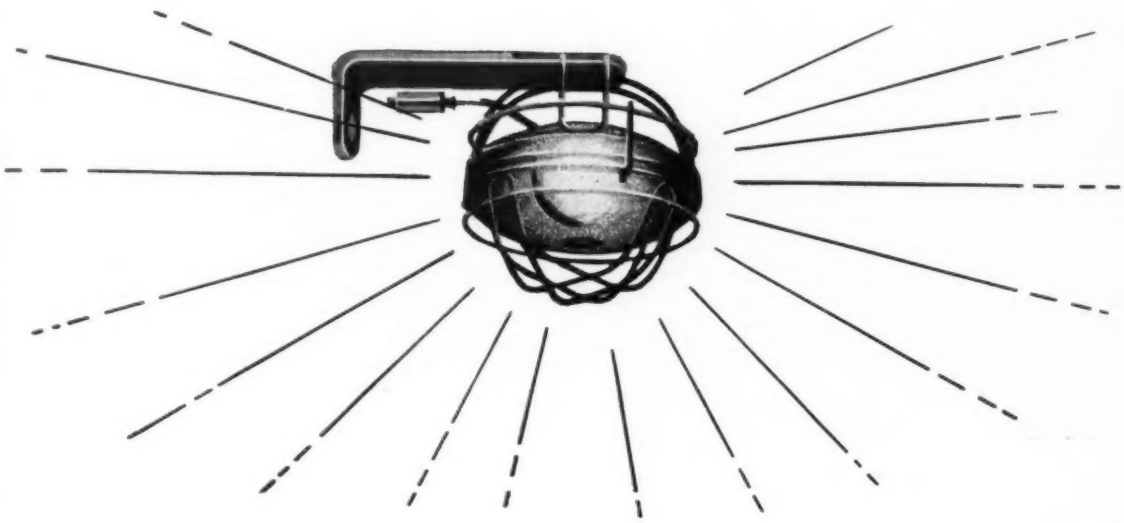
Maloney Leaves Canton for Protective Post

Fire Chief Laurence C. Maloney, veteran chief of the Canton, O., Fire Department, resigned his post as chief which he has held since 1949, to accept a position offered him by the Hercules Motor Corp. to head up plant protection with that organization.

Chief Maloney joined the department May 31, 1920, and worked his way up to captain to which post he was appointed March 1, 1933. He was advanced to assistant chief on August 9, 1944, and to chief on November 1, 1949.

In October 1941, the chief was sent to Edgewood Arsenal to take the Army's civilian protection course. As an assistant chief he was instrumental in teaching fire department procedure. In May, 1950, he attended the seminar

Commssioner Leo Shapiro pins the gold badge of "Chief" on Arthur Fiedler, Boston "Pops" Orchestra Conductor as Chief Edward P. Walsh and Commissioner Robert Schaefer (left) look on.



THE FIRE WATCH THAT NEVER SLEEPS

ARE the buildings you inspect ready for fire no matter *when* it strikes? Week ends? Nights? During shut downs? It pays to recommend a Kidde automatic Fire Extinguishing System—it's *always* on the alert against fire.

The heat from a flame hits the Kidde detector : : : sending a signal that releases flame-smothering carbon dioxide automatically. Such a system can protect a single space : : . or many spaces throughout the plant.

Wherever a fire hazard exists, in flammable liquids, electrical equipment, document vaults, you can safely recommend a fire-sensitive, fast-acting Kidde automatic or hand-operated system to protect the property with no after-fire mess or water damage. Call on us today for full information.

Kidde

Walter Kidde & Company, Inc., 1033 Main Street, Belleville 9, N. J.
Walter Kidde & Company of Canada, Ltd., Montreal, P. Q.

HALE Type FZZ Portable Pumping Unit

Handy For Re-Laying To Major Pumper

- Compact yet powerful:
- Designed for Fire Fighting

Write Today!

FE

HALE FIRE PUMP COMPANY
Conshohocken, Pa.

Gentlemen:

☐ Please send us detailed information on the HALE Type FZZ Portable Pumping Unit.

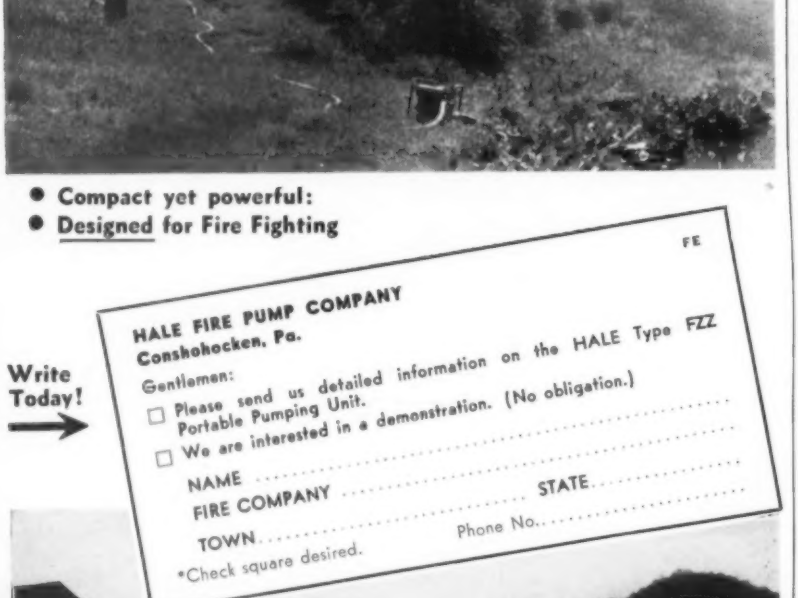
☐ We are interested in a demonstration. (No obligation.)

NAME .....

FIRE COMPANY ..... STATE .....

TOWN ..... Phone No. .....

*Check square desired.



Directly above — For 12 hours these two FZZ units supplied water through 650 ft. of 1½" hose to a large pumper fighting a barn fire. At top—Single FZZ relaying to major pumper.

on arson at Purdue University. Succeeding Chief Maloney is William H. Rosche who placed first in the examination held for chief. Chief Rosche took over as head of the department on September 1, 1951. Capt. Robert W. Yant was appointed to the post of assistant fire chief to succeed the new chief. Fireman Roger E. Brown was advanced to the position of captain, to fill the vacancy left by Yant.

The new chief is a 31-year fire department veteran, 54 years old. He joined the force in February 1920, was advanced to captain in October 1931 and assistant chief in April 1937.

Chief Rosche is secretary of the Ohio Fire Chiefs' Association.

Chief Brosnan Resigns

Fire Chief D. W. (Bill) Brosnan has resigned as head of the Albany, Ga., Fire Department, after 51 years in the organization, 40 years as its head. His resignation climaxed controversies with his local administration over maintaining the rate of progressiveness that has kept Albany, and Chief Brosnan in the forefront of fire prevention and protection of the nation for many years. His resignation has had repercussions throughout the entire south.

D. W. Brosnan

Through "Bill" Brosnan, Albany, Ga., won so many awards for fire prevention and control under the U. S. Chamber of Commerce program that he finally withdrew its candidacy "so that other cities could have a chance to get recognition."

Albany boasts the lowest fire insurance rate of any Georgia city. This is partly due to the unremitting effort of the chief and his department to adopt and enforce fair building codes and fire prevention codes. Chief Brosnan's philosophy was: "The only fire which cannot destroy property and endanger human life is the fire that never starts." He launched that doctrine 40 years ago, and sold it to his community, winning the support of press, schools, churches, civic, patriotic organizations and businessmen. Thus Albany became as nearly a "fireless city" as human resourcefulness and perseverance could make possible.

As much a martinet as a hard-boiled football coach, maintaining ironlike discipline, the chief never sent his men in where he wouldn't go himself. He never

lost a man at a fire. He obtained pay increases and liberal pension system for his department, along with other improvements.

Throughout his career, "Bill" Brosnan preached his doctrines before the nation's fire service. This brought him wide acclaim and supporters. In addition to heading numerous southern fire service organizations, he was elevated to the presidency of the International Association of Fire Chiefs in 1931. Following that he served on the Board of Directors, and on numerous committees.

In his going the fire service has lost a shining crusader in the cause for better fire prevention and protection. He will be missed nationally—as well as locally.

Commissioner Wm. H. Baumann Honored

Nearly 100 public officials, including fire chiefs and commissioners from five New England states, tendered a surprise dinner to William H. Baumann, recently-named commissioner of the Vermont Department of Public Safety, at the Hotel Bardwell, Rutland, Vt. The toastmaster was Fire Chief Alfred H. Koltonski. The guest of honor was presented with a handsome traveling bag.

Pax. Mendelssohn Honored as City Accepts Ambulance

Paxton Mendelssohn, Fire Commissioner of the City of Detroit, member of the International Association of Fire Chiefs and other fire service and fire buffs clubs too numerous to mention, received the further plaudits of Detroit city and fire officials on Sept. 11, 1951, when at noon the fire ambulance, which he had presented to the city twice—the second time following a complete rebuilding job, was officially "accepted" and placed back in service.

Commissioner President, James L. Mahon, officiated, presenting his fellow commissioner with a framed, engrossed resolution of appreciation. The modest donor then briefly acknowledged the ceremonies and thanked the commissioners. Mayor Albert E. Cobo accepted the vehicle in behalf of himself and the city and bestowed further praise upon Mendelssohn. But this wasn't the end of the affair. The Common Council President, Louis Miriani, added his and the council's appreciation, following which Fire Chief Ninnian Higby spoke his praise, after which came more praise from the Department Physician Dr. Carl Schulte and Robert Beale, Secretary of the Firemen's Union.

The affair was topped off by a dedication luncheon given by the donor at the Book Cadillac, with 35 in attendance, including the beforementioned and members of the Box 12 Club of Detroit, of which Mendelssohn was for years "Chief" buff.

It is also disclosed that some weeks before this Commissioner Mendelssohn was presented with another framed testimonial resolution by the City Council in appreciation of all the gifts he has made the Detroit Fire Department. To cap the climax, two weeks later he was honored by a similar resolution from the Fire Fighters Association in behalf of the Union members of the Department.

MODERNIZE YOUR EQUIPMENT—INCREASE FIRE-KILLING POWER —AT TOTAL COST OF JUST $60

Recent developments in equipment have made many fire trucks old fashioned. For today a truck can battle—and beat—fires that were much too tough not many years back. Big flammable liquid fires, for instance. Spill fires. And fires covering a wide area.

What's more, trucks can multiply the effectiveness of the present capacity of their water tanks when they must go beyond the range of regular water supply. Now they can "stretch" what's in the tank. With 100 gallons of water, they can produce as much as 1,750 gallons of fire-extinguishing agent.

If your trucks don't measure up to these specifications, your department isn't able to do as efficient a job as it *could* do.

You need to *modernize*. And you can—for the record low price of just $60 a truck!

Multiply your fire-fighting effectiveness with Air Foam Playpipes!

This great advance in the science of fire fighting is the result of the invention of *air foam*. Imagine this—with one gallon of Pyrene* Air Foam Compound and 20 gallons of water, you can produce 350 gallons of fast-acting, sure-killing air foam. And you can do it *instantly*—with no complicated apparatus, no difficult operating tricks. You simply connect the Pyrene Air Foam Playpipe to a hose line. The playpipe automatically mixes foam compound and water to produce huge quantities of air foam. You discharge it from the playpipe just as easily as water from a regular hose nozzle—and from a safe distance. With a flick of your hand, you can make the playpipe discharge plain water instead of foam. One man can operate the playpipe by himself—anywhere your hose lines can go.

Think what this means! With a 100 gallon water tank and only 6 gallons of Pyrene Air Foam Compound, *you can produce 1,750 gallons of air foam*—even though there's no way for you to get another single gallon of water. Where you are working directly from a hydrant or suction, you can continue to make foam indefinitely. And air foam fully equips you to fight flammable liquid fires, as well as those in ordinary combustibles. Pyrene Air Foam puts them out quickly, positively—and keeps them out. Coats and insulates nearby property against spread of fire, too. It will step up enormously the fire-killing power of every truck you have.

$60 brings you complete Pyrene Air Foam Equipment— nothing more to buy

Don't think that air foam is a brand-new, untried idea. Far from it. It has proved its worth in war and peace. It is extensively used by the Armed Forces. Right now it's doing a big job for thousands of fire companies everywhere. Many say they don't know how they ever got along without it!

You can have complete confidence in this equipment, because it was developed and is being produced by Pyrene, acknowledged leader in the fire-extinguishing field. It will do for you everything we say it will. Compared to what it gives you, the cost is trifling. You can have a Pyrene Air Foam Playpipe, pickup tube, hose adapter and four gallons of foam compound for just $60. That's all you need! Nothing to replace except the foam compound. No installation. Your $60 takes care of everything!

See the playpipe for yourself!

Your department owes it to itself to inspect this remarkable equipment—to ask questions about it. Send the coupon, and we'll see that you can do all these things, and with no obligation to buy whatsoever. Don't wait—send the coupon now!

*T.M. Reg. U.S. Pat. Off.

Pyrene AIR FOAM

PYRENE MANUFACTURING CO.

(Affiliated with C-O-Two Fire Equipment Co.)

594 Belmont Ave., Newark 8, New Jersey

Yes, we'd like to see how the Pyrene Air Foam Playpipe can multiply the effectiveness of our fire-fighting equipment for just $60. I understand we are under no obligation whatsoever to buy. Have someone come around to our firehouse on _____ (date) at _____ (time).

We're convinced! Send us _____ sets of model PP14 Pyrene Playpipes, Foam Compound, pickup tube, hose adapter—all @ $60 a set. Our hose thread size is _____

My name _____

Name of our department _____

Department address _____

City or town _____ State _____

My position _____

Chief Fields of Omaha Loaned to FCDA

Battalion Chief Eugene W. Fields, head of Rescue and First Aid Division of the Omaha, Neb., Fire Department, has been loaned by his city to the National Defense Agency for one year to serve as Chief of Training for Technical Services for National Civil Defense in Washington.

Chief Fields, a member of the department for 19 years and head of the Rescue Division for three years, was assigned to detached duty as Chief of Operations for CD in Omaha and Douglas County in January, 1951. He served in World War II as a Lieutenant in the Navy in Fire Fighting and Salvage.

'Jim' Flynn Recovering

James A. Flynn, President, Potter Manufacturing Company, Chicago and New Amhersberg, Canada, better known to the fire service of the nation as "Jim" and male partner of the popular team of "Jim and Bess"—is recovering from illness suffered while he was attending the annual conference of the International Association of Fire Chiefs in Grand Rapids, Mich., August 14th, last.

J. F. Gorman, Now Heidelberg Fire Marshal

John F. Gorman, formerly captain in the Binghamton, N. Y., Fire Department, has assumed duties as fire marshal of Heidelberg Military Post in the U. S. Zone of Germany. He is a veteran of 24-years service with the Binghamton department, in charge of fire prevention and protection in the three cities of the Post area, and at US Armed Forces European Command headquarters in Heidelberg. He returns to the Army's European Command after a year in Binghamton. Prior to that time he had served 18 months as assistant fire chief at the Bremerhaven, Germany, Port of Embarkation.

FIRE SOLVOID WET

SO-1

Fastest! Lowest Cost!

PROVEN BY 500 FIRE DEPARTMENTS

KNOCKS OUT FIRES IN HALF THE TIME

CLASS-A FIRES
Surface: 1 gal. to 2000 gals. water.
Shallow: 1 gal. to 1000 gals. water.
Deep: 1 gal. to 400 gals. water.

CLASS-B FIRES
1 to 200 concentration; 3%-5% produces a stable foam using a foam play pipe.

MORE THAN DOUBLES SUPPRESSION VALUE OF WATER . . . COSTS 1/5¢ PER GAL. OF WATER TREATED FOR SURFACE FIRES

Proven effectiveness in amazingly low concentrations is why SOLVOID is the best of wetting agents. Using SOLVOID average fire outs require 75% less water and 50% less time; smoldering and rekindles are practically unknown. SOLVOID is non-toxic and non-corrosive and is harmless to tanks. SOLVOID's exclusive INJECT-TA-LINE Proportioner introduces ¾% to 1/20% concentrations directly into 1" and 1½" hose lines; can be refilled under full pump pressure.

IMPACT FOAMING

Picture at right shows SOLVOID smothering a gasoline fire in 90 seconds using 1 to 300 concentration and a standard ⅜" solid stream nozzle.

PRICES f.o.b. San Francisco

$4.40 Per Gal. (in 5 gal. pail)
$4.25 Per Gal. (in 29 gal. drum)
$3.95 Per Gal. (in 53 gal. drum)

When ordering please furnish name of your preferred equipment dealer.

Send Coupon TODAY!

SOLVOID Division,
American Marine Paint Company
311 California St., SAN FRANCISCO
Without obligation please furnish detailed information about SOLVOID as checked below.
☐ Class-A Fire Data ☐ Class-B Fire Data
☐ INJECT-TA-LINE Proportioner ☐ Sweeney Report
NAME
TITLE
ADDRESS
CITY STATE
OUR EQUIPMENT DEALER IS:

Sweeney Report 3 year—390 FIRE TEST of SOLVOID

WELL WORTH CAREFUL STUDY . . . is the factual report of Fire Chief Sweeney of Antioch, Calif. Copies available on request.

SOLVOID Division,
American Marine Paint Company
311 California St., SAN FRANCISCO, Calif.

Distributed only through top-flight Fire Equipment Dealers

Obituaries

Geo. W. Booth

George W. Booth, who was an outstanding figure in the field of fire prevention as chief engineer of the National Board of Fire Underwriters for 39 years, died October 2 at his farm home in Lebanon township, New Jersey. He was 80 years old.

George W. Booth

Mr. Booth, who retired from the National Board on Dec. 31, 1949, was recognized as an authority on water supply systems and had directed the engineering survey work of the National Board, which now includes inspections of fire fighting facilities of all U.S. cities over 25,000 population.

Born in Southbridge, Mass., Mr. Booth was graduated from Worcester, Mass., Polytechnic Institute in 1891, with a degree of bachelor of science in engineering. He taught at Worcester Polytechnic for two years following his graduation. In 1941, he was awarded an honorary degree of Doctor of Engineering by the school, upon the 50th anniversary of his graduation.

From 1893 to 1904 he worked for the Massachusetts Board of Health and the Massachusetts Metropolitan Water Board. In 1904, he joined the National Board of Fire Underwriters, which is the public service organization of the nation's capital stock fire insurance companies. At that time, the National Board was just starting its inspections of the water supplies, fire fighting facilities and conflagration hazards of American cities.

He undertook direction of these inspections when he was appointed chief engineer in 1910. These inspections now cover more than 460 major cities and are

considered to be of vital importance in maintaining standards for the effectiveness of water supplies, fire alarm systems, fire departments and building law enforcement.

Under his supervision, the engineering work of the National Board was developed to include preparation of model Fire Prevention ordinances that have been widely adopted by American municipalities, a bulletin information service for fire departments, extensive research into new fire hazards in industry, and the publication of standards for fire prevention and fire protection in a wide variety of fields.

Mr. Booth was active in the campaign to provide uniform hose couplings in American cities. The need for this became apparent when fire equipment from New York City was rushed to help fight the Baltimore conflagration of 1905; the New York equipment could not be used because the two cities had different size hose couplings.

As a result of a long range campaign by the National Board and regional insurance organizations, about 6,000 communities in the country have now adopted standardized hose couplings, so fire equipment from one city may go to the aid of other fire departments in case of emergency.

Mr. Booth was a member of several professional organizations, including the American Society of Civil Engineers, honorary life member of the International Association of Fire Chiefs, honorary life member of the National Fire Protection Association, and honorary member of the American Water Works Association.

Since his retirement in 1949, he had been living on his farm in Lebanon Township, where he was interested in conservation and reforestation work.

Chief Bryant of West Allis

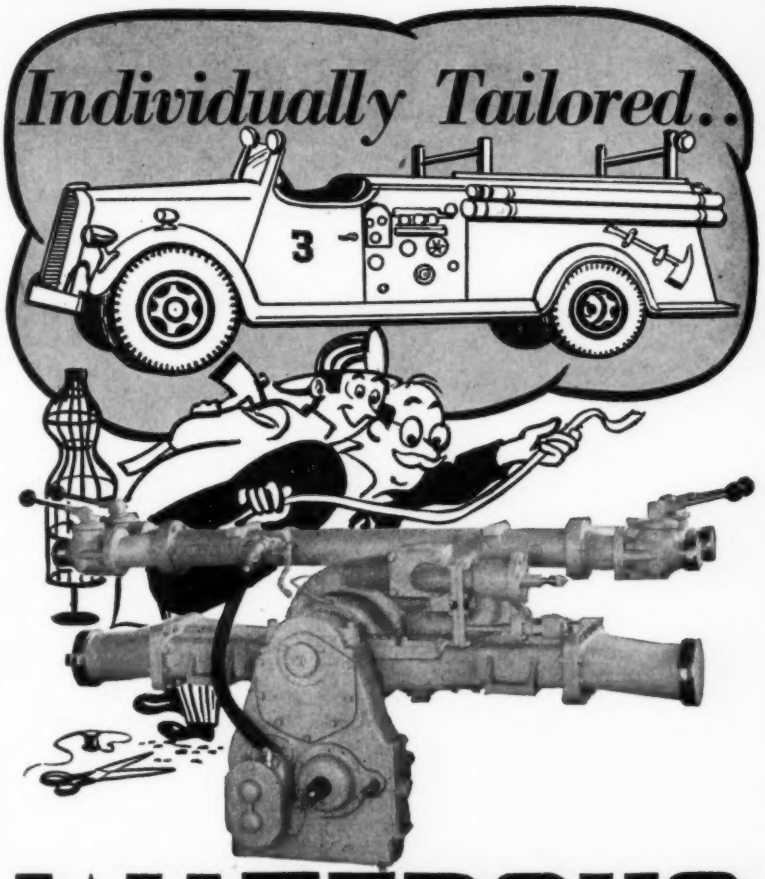
Edwin N. Bryant, retired chief of the West Allis, Wis., Fire Department, passed away September 8th, at the age of seventy-three, after a long illness. Chief Bryant entered the fire service of the City of West Allis as a member of the volunteer fire department. He was appointed assistant chief in September, 1916, and when the organization became a paid department in 1930, he was made chief. He retired on January 1, 1947, after 17 years in that post. Chief Bryant was active in state and national fire service organizations and in civil defense during World War II. He is survived by a wife, and one daughter.

Chief Girens of Oshkosh

Fire Chief Leo J. Girens, of Oshkosh, Wis., died of a coronary condition Sept. 14, 1951. He was appointed chief in 1945, having been a member of the department since 1932.

Chief Girens, who was 47, was Treasurer of the Wisconsin State Fire Chiefs Association at the time of his death. After World War I he enlisted in the regular Army and later resigned his commission as lieutenant when he joined the fire department. He was promoted to fire lieutenant in 1943, to captain in 1945 and, in July of that year, to chief of the department, succeeding the late George J. Revland.

Funeral services were attended by city officials, uniformed members of the Oshkosh Fire Department and fire



WATEROUS

dependable FIRE PUMPS

WE DON'T USE A TAPE MEASURE, but we do tailor our pumps to each make and model of engine.

By selection of the proper gear ratios, the speed, capacity, pressure and horsepower requirements of the pump are fitted to the range of speed and horsepower of each engine. Ample horsepower is assured for each pump duty at engine speeds well below allowable maximums. WATEROUS Fire Pumps have built-in surplus capacity and pressure to match the surplus horsepower of the engine. WATEROUS Fire Pumps are built by master craftsmen with years of know-how—your assurance of dependable performance.

Specify WATEROUS—write for copy of "Preferred Fire Pump Specifications"!

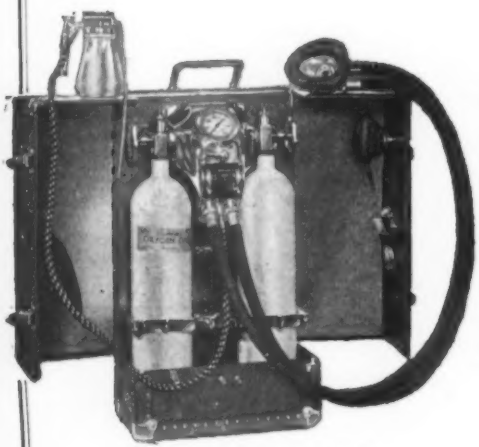
Waterous DEPENDABLE PUMPS SINCE 1886

WATEROUS COMPANY
80 EAST FILLMORE AVE.
ST. PAUL 1, MINNESOTA

MODERNIZE YOUR LIFE-SAVING EQUIPMENT

With a

STEPHENSON-4-IN-1-RESUSCITATOR



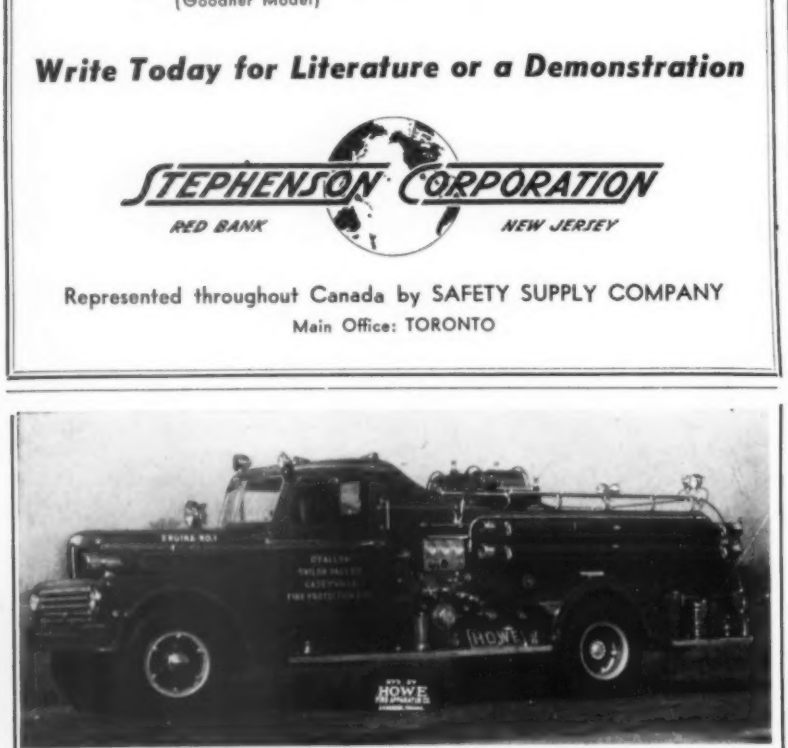
STEPHENSON RESUSCITATOR
(Goodner Model)

You can do more for the patient when you have 4 machines in 1 — and when you can control pressures and oxygen-air mixtures. Let us show you how!

Write Today for Literature or a Demonstration

STEPHENSON CORPORATION
RED BANK NEW JERSEY

Represented throughout Canada by SAFETY SUPPLY COMPANY
Main Office: TORONTO



HOWE Fire Truck Equipment Meeting Every Service Since 1872
Centrifugal, Rotary and Piston Pumps Supplied
HOWE FIRE APPARATUS CO., 1402 W. 22nd St., Anderson, Indiana

chiefs and officials from nearly all Wisconsin municpalities.

He was a member of the International Association of Fire Chiefs, Great Lakes Division, and the International Association of Fire Fighters.

Valentine Fendrich

Valentine Fendrich, 69, who retired in 1947 as head of the New York Fire Department's Bureau of Fire Alarm Telegraph, died Sept. 21, 1951, at his home in Bay Shore, L. I., N. Y.

During his 27 years as head of the Bureau, he was instrumental in the development of the largest fire alarm and telegraph system in the world. He joined the department in 1911 as an assistant engineer. He was born in New York City, and received a mechanical engineering degree from the Stevens Institute of Technology in 1905.

He is survived by a wife, a son, a brother and a sister.

Chief J. P. Tracy

Joseph P. Tracy, 58, Chief of the Norwich, Conn., Fire Department for 12 years, died suddenly on Sept. 9 while leading firefighters in fighting a fire at 26 Lincoln Avenue, Norwich.

Chief Tracy was a member of the Norwich Fire Department since 1914. Dr. Henry A. Archambault, Assistant Medical Examiner, said Chief Tracy was stricken apparently with a heart attack, while on the third floor of the house.

When he collapsed, firemen worked over him with an inhalator and he apparently was revived. However, the Chief had a sudden coughing spell and passed away.

Chief Tracy was on vacation at the time, but when he was informed that the fire was in the downtown section of the city, he went to the scene. His death occurred about a half hour after he reached the scene of the fire.

Chief Tracy was a member of the Connecticut Fire Chiefs' Club, and the Connecticut State Firemen's Association.

TOM MAGNER

Chief Geo. J. McCarthy

George J. McCarthy, Chief of the Westfield, Conn., Fire Department for several years, died in his home in that city on Sept. 19. He was also Chairman of the Democratic Town Committee and served as Executive Director of the Housing Authority, resigning in 1946 to become Eastern Connecticut manager of the Lehigh Petroleum Company.

Mr. McCarthy is survived by his wife, Mrs. Gertrude Callahan McCarthy; one brother, David, of Meriden; and two sisters, Mrs. Rolland L. Gaffney, and Mrs. Eleanor Czech, both of Middletown. Funeral services took place on Sept. 21.

—TOM MAGNER

Chief F. W. Cramer

Frank Warren Cramer, 64, Chief of the Shelton, Conn., Fire Department from 1927 through 1947, and Fire Marshal from 1935 to 1948, died on August 13 while at work in the Star Pin Company plant in Shelton.

Born in Kent, Conn., August 23, 1886, Chief Cramer had been an active fireman since June 6, 1907, and in 1919 had

served as Captain of the Echo Hose Hook and Ladder Company.

He was a past president of the Fairfield County Fire Chiefs' Plan; a member of the Connecticut Fire Chiefs Association, and the Connecticut Fire Marshal's Association. He is survived by his wife, Mrs. Belle Heusser Cramer; two sisters, Mrs. Louis P. Beardsley and Mrs. Daniel Grady, Dr., and several nieces and nephews.

TOM MAGNER

Asst. Chief Hathaway Dies at Fire

Floyd Hathaway, 48 assistant chief of the Morris Township, N. J. Volunteer Fire Department, collapsed and died of a heart attack on Sept. 20, 1951, while directing firemen fighting a fire in a refuse dump.

Annual Reports Received

Blackwell, Okla., Alarms, 243; Loss $276,580 in '50

The year 1950 showed the highest fire losses in the history of Blackwell, Okla., according to the department's 1950 report, Fire Chief George E. Gebelein. This was largely due to one major fire which did $250,000 estimated damage. The department ran 4,774 blocks, covered 102 miles outside the city; raised 680 feet of ladders; used 33,550 feet of 2½-in. hose; 400 feet of 1½-in. hose and 39,400 feet of booster hose.

* * *

Philadelphia Operations Increase

The report of the Bureau of Fire of the City of Philadelphia, Chief John C. Cost, for the year 1950, shows that during last year alarms increased by 1,950. Actual fires increased 334 and false alarms were up 382 over the year previous. Unnecesary alarms decreased by 64, but "operations" increased by 1,291 "surpassing all previous records."

Total fire losses were reported at $7,207,848 compared with $5,867,561 in 1949. Numerous improvements were made to the department during the year in the program of improvement to make the department second to none. These include the addition of two new fireboats, 13 aerial ladders, 7 pumpers, 8 combination cars, 2 pipe line cars, 1 light wagon, 1 rescue squad, 7 battalion chiefs' cars, 9 fire marshals' cars and 10 miscellaneous trucks. Eleven new fire stations are either on paper or under construction. The department now has a complete public address system in all stations; all engine companies are equipped with fog nozzles, "walkie talkies" are carried on all fireboats and several chief officers' cars, two-way radio is being installed by the Electrical Bureau on all fire apparatus to be completed this year.

* * *

British Columbia Losses Down

The report of the British Columbia Fire Marshal (W. A. Walker) for the year ending Dec. 31, 1950, snows that fire losses for the year were down $503,523 from the year previous. Losses in 1950 were $7,052,706. During the period fire took a toll of 60 lives, 19 of them children. Figures include data from 35 municipalities; 27 District Municipalities; 39 Village Municipalities, 20 Fire Districts.

If the fire's roaring when you roll in, you're on the defensive from the start. But you know of many fires that you could have stopped if you could have just "gotten through the door."

Well, UNOX Penetrant-*Wet Water* will get you through a lot of doors. You've never seen fires go out so fast as you'll see with this effective penetrant. And you won't get rekindles.

Just mix UNOX Penetrant in your booster tank or proportion it into your lines. This *Wet Water* will do 3 to 4 times more fire-fighting than plain water. If you want to see real "knockdowns"—get UNOX Penetrant from your fire equipment dealer today and use it.

See our 16 mm. sound-color film, "Fire-Fighting with Wetter Water," loaned free. Write to our dealer or direct to Carbide and Carbon Chemicals Company, 30 East 42nd St., N. Y. 17, N. Y.

"UNOX" Trade-Mark *Penetrant*

CARBIDE AND CARBON CHEMICALS COMPANY

A Division of Union Carbide and Carbon Corporation

GLASS*

Fire Helmets

Stronger than Steel!

New lightweight champion!

Molded *Fiberglas sets new standards for protection. Resilient construction *absorbs* blows; protects neck & spine.

Naturally insulated against heat. Radiation tests indicate 10% cooler inside. Acid and chemical resistant; non-conductor of electricity.

Greater Comfort: Weighs only 20 oz. Fully ventilated. Headband assembly self-shaping like a felt hat. Adjustable headband; one size fits all heads. Choice of black, red, or white in solid, molded colors. Write to E. D. Bullard Co., 275 Eighth St., San Francisco 3, Calif.

WRITE FOR CIRCULAR

EVERYTHING BULLARD IN SAFETY — HARD BOILED

Distributors in Principal Cities

© E. D. B. Co.

Hard Boiled

FIRST Name in Safety Hats—*since 1919*

The WATCH DESK

Overhauling the firemanic news of the day

by ROI B. WOOLLEY

From an "Anonymous Vamp"—for the Record

On a July day, the Sedro-Woolley (the ONLY Sedro-Woolley on earth and it is spelled with a hyphen) Washington Volunteer Fire Department received a call to a fire at Camp 18, Sound View Pulp & Timber Co., a distance of 18 miles from Sedro-Woolley. While responding with the rural truck from Sedro-Woolley Fireman driver, Maurice Davis was crowded off the road on a blind curve and the rear end of the truck hit a concrete post knocking off a Herbert Hose Clamp (which incidentally are manufactured by Chief Herbert of the Sedro-Woolley Volunteer Department), and bending the tail board pretty badly.

Davis, who is captain of first aid on the local department, kept going, while Fireman Rings, who was riding with him, after a quick look to the rear reported the back end was still following. After arriving at the fire, which caused a reported $150,000 damage to a warehouse and shop, (it was touchoff), it was found that the Herbert Hose Clamp was defunct and not to be found anywhere along the route traveled, although en route home the vamps looked diligently for it.

To continue the story: in Sedro-Woolley they have what is called the Valley Auction Barn, Captain Davis, who is also Assistant Chief of the Sedro-Woolley Police Department, has a hobby of attending these auctions. Well sir, on a Wednesday, after a period of 13 months, an article, painted red, came up for auction at the Barn. The auctioneer put it up for bid, saying he didn't know what it was and neither did the person who brought it in for sale.

There was a bid of 50c and then Davis, who recognized immediately what it was, got in a bid of 75c. Sold to Captain Davis!—who immediately returned the much-sought-for clamp to Chief Herbert. The latter is still looking for the guy who made the first bid.

P.S. It's whispered there was one other fireman at the auction. He is reported to have been from a neighboring and "alien" fire department.

* * *

Hamilton Police and Fire Services at Odds Over Collision

The Police Department of the City of Hamilton may lay a charge against the driver of one of the city's fire trucks for failing to stop at a red light at a local street intersection while the apparatus was responding to a small chimney fire.

The pumper collided with a bus at the corner of Cannon and Ottawa streets, causing injury to the bus driver and one fireman. Police report the eastbound fire truck crossed the intersection with its siren sounding and that the vehicle was half over when it was struck in the side by the bus; both vehicles remained upright. The damage to the fire apparatus was extensive. According to Fire Chief J. E. Nixon, fire department apparatus are required to pull up at stop lights and then proceed with caution. The Chief stated he had investigated the accident and believes the pumper driver obeyed the regulations, as the siren was sounding and the speed was 10 miles per hour.—J. K. Lee.

* * *

Hot Off the Tape

In Bloomington, Ill., farmer, Joseph Oliver, wanted to keep his 5-year-old son out of the barn so he told him: "The bogey man is in there." Several hours later, the lad marched triumphantly into the house and informed his father to worry no longer about the bogey man. "I just burned him out." he explained. He had, too. Barn and contents were going up in flames (Thanks R. H. Davidson). . . . In Terre Haute, Ind., a fireman was killed, and a chief and two city policemen injured critically when two autos rushing to the scene of a gas explosion collided at a street intersection. Dead man was Richard Gray, 53, an instructor at fire headquarters. . . . When the Draper Cannery artesian well water pump went kaput, the factory in Milford, Del., which was packing vegetables, and running to full capacity, faced a critical shutdown. A call for help brought the Carlisle Fire Company. Using one of its pumpers, the vamps pumped water into the cistern to fill the large tank at the factory and prevent the shutdown. (Thanks Rev. Wilson Davis.) . . . A dying woman with fragments of burning clothes still smoldering on her body was found about 4:30 A.M. on the lawn of a home in Roosevelt, L. I. Hours afterwards she remained unidentified, nor were there any clues as to how she caught fire. . . . Firemen Cloyd Moran, 31, of Engine 11 and Julius Carry, 26, of Engine 48, Chicago Fire Department, were injured when the rear wall of a burning one-story brick building at 4320 Indiana Ave. was blown outward, carrying them with it. . . . Detroit police want to know why 8-year-old Lavada Casey, who rescued her two tiny charges, an 18-months-old baby and a tot of two years, from a burning house, was ever hired as a baby sitter in the first place. . . . In Springfield, Ill., 22 youngsters who went up in a Ferris wheel for excitement got more than they bargained for when the giant wheel stuck. Firemen with an aerial ladder from the Springfield Fire Department did their extra-curricular stuff, and all was well. . . . A funeral director of Highland Park, N. J., agrees that his hearse is generally the bearer of sad tidings—but one day it was a hearse of a different color. His empty hearse, garaged next to his funeral home, caught fire about 5:00 A.M. Its horn shorted, sounded the alarm, awakening neighbors who called firemen, who saved the funeral home. Hearse, valued at $6,000, was destroyed. . . . In Houston, Tex., Edward Marrs, 57, angrily contended that he had heard no siren when a brand new fire engine smacked his car on August 2nd. He hadn't. The siren had dropped off the apparatus six blocks further back. . . . James Morris, 27, New Britain, Conn., was charged on Aug. 4th with burning his 3-year-old daughter with matches because she failed to return home from play on time. He was arrested, held on $10,000 bail.

. . . An employe of the Lakeland General Hospital, Camden, N. J., confessed starting three fires which caused $40,000 damage to the institution. . . . Mrs. Angelina Schaefer, 30, who leaped three stories from a blazing Brooklyn building May 5 last, became the mother of a perfect baby girl despite injuries that had made birth seem impossible. She has fractures of pelvis, hip and spine, a crushed heel. Baby was born two weeks prematurely by Caesarian section. They may call the infant "Miracle." . . . Fire fighters of Jacksonville, Ark., near Little Rock, decided to do something about motorists who get in the way at fires. So they put in a false alarm. When motorists started driving over fire hose at the "scene" of the non-existant fire, firemen started squirting water at the motorists. One man took a punch at a fireman. It cost the slugger $10 in court for the fireman's shiner.

* * *

Sirens Help Alert Persons Perilled by Gas

Patrolmen Joe Murphy and Ben Jones of the Louisville, Ky., P.D. are glad they had their siren on their prowl car. So, too, are a lot of good citizens of Louisville, who might have been injured or killed, but for the team of Murphy and Jones.

Shortly before dawn Aug. 10, last, a 200-foot stream of burning gasoline throwing flames 15 feet high, ran down the curb, destroying five automobiles and a truck, and damaging a home and a truck van. The patrolmen, on routine cruise, spotted the flames spewing from an underground tank.

Seems that a J. B. Evans had been filling a gasoline storage tank from a gasoline tank truck. Evans said he saw gasoline bubbling from the storage tank and trickling toward the curb and before he knew it, the stream suddenly and mysteriously ignited. Evans said he ran for an extinguisher but his trouser legs caught fire and he had to look after himself.

Meantime, Murphy and Jones, arriving fortuitously, opened up their siren, fired pistols and banged on doors to arouse the nearby sleeping residents, after turning in a fire alarm. The Brothers had a hectic time of it before the "all out" signal was struck.

* * *

Phone Company Advises Pull the Box

Looks like a case of man bites dog, or the arrival of the millenium, but Fire Chief Hugh L. Eames, of Reading, Mass., vouches for this notice, which appeared in the August issue of a little brochure, *Between Ourselves*, published by the Public Relations Dept. of the New England Telephone Co. and enclosed with company bills:

"*Pull the Box*": Generally speaking, something like one-third of all fire alarms are placed by telephone. We are glad to be helpful. Nonetheless we echo the sage advice of fire department authorities that, where a regular fire alarm system exists, you should be sure to pull the box.

It is as fast. Sometimes faster. It doesn't risk burned-off wire. It doesn't develop hysteria. It pinpoints the location of the fire.

Use your telephone if you wish, but regard it as no more than a second string to your bow. Know where your nearest fire box is. "Should you have a fire, pull it."

Thanks, CHIEF EAMES.

SENSIBLE

FOR ALL YOUR HOSE CONNECTIONS

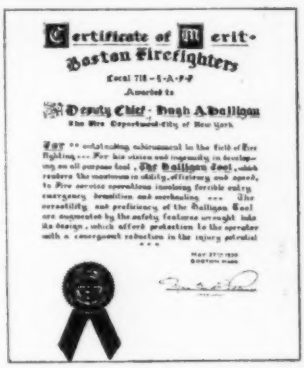
improved
SENSIBLE LUG COUPLINGS
insure
QUALITY
and
SAFETY

The improved Powhatan "Sensible-Lug Couplings" are precision tooled and manufactured of only the best high grade materials. They set a standard that is "tops" in this specialized field of fire-fighting equipment. The curved surfaces of this modern coupling enable the hose to glide easily over all obstructions, thus preventing snagging, an important safety and economical feature appreciated by those who know.
Specify "Sensible"

POWHATAN BRASS *and* IRON WORKS
RANSON, WEST VIRGINIA
Phones 93 & 94 Charles Town, West Virginia
Established 1892

FROM COAST TO COAST PROGRESSIVE FIRE and POLICE CHIEFS, TO PROTECT THEIR MEN, and SAVE TIME, LIFE and PROPERTY —
give them the
HALLIGAN TOOL
10 TOOLS IN ONE — DOES EVERYTHING — EVERYWHERE

ONE MAN—*alone*—*for forcible entry.*
Ventilation, brick walls, roofs, floors, trim, ceilings. All inside or outside work.


Certificate of Merit
Boston Firefighters
Local 718 - I.A.F.F.
Awarded to
Deputy Chief Hugh A. Halligan
of the Fire Department City of New York
For ... outstanding achievement in the field of fire fighting ... For his vision and ingenuity in developing an all purpose tool, the Halligan Tool, which restores the maximum in ability, efficiency and speed, to fire service operations involving forcible entry, emergency ventilation and overhauling ... the versatility and proficiency of the Halligan Tool are augmented by the safety features wrought into its design, which afford protection to the operator with a consequent reduction in the injury potential ...

M. A. HALLIGAN, 1505 Metropolitan Ave., N. Y. 62, N. Y.

gets the drop on FIRE

DRENCH DOUBLES WATER SUPPLY SPEEDS ACTION

For faster, more thorough action on fire with less water, add Drench to your water supply.

Makes water wetter! Just a 1% proportion by volume of Drench added to your water supply will double its fire fighting effectiveness. Helps you fight fire faster . . . knock it down . . . and keep it down.

Drench effectively changes the characteristics of water without limiting its use or requiring special equipment. Join the hundreds of fire companies now using Drench. Write for complete details on how you can save on water . . . damage . . . and stand-by protection with Drench.

NATIONAL FOAM SYSTEM, Inc.
West Chester, Pa.

DRENCH

A NATIONAL FOAM PRODUCT

For Practical Discussion of Current Fire Department and Fire Management Problems

CIVIL DEFENSE PROGRAMS OF FIRE DEPARTMENTS

THE discussion in this Round Table is a continuation of that which appeared in the August and September issues on Civil Defense programs of fire departments.

The generous response from our readers makes it necessary to carry over the discussion to this issue and the November issue as well.

Readers are invited to send in their comments on this subject which is described in the box below, to Round Table Editor, FIRE ENGINEERING, 24 West 40th Street, New York 18, N. Y.

Discussion of the Question

Clyde Dunn, Chief, Omaha, Neb.: We have a Civil Defense program in Omaha. It consists of auxiliary groups of firemen, police, ambulance drivers, rescue units, first aid units, etc.

We are not a member of a mutual aid group.

We would like to have at least 500 auxiliary fire fighters in the program, but to date have enlisted about 180. This figure has dropped to about 100 members. We have trained the above members as first class fire fighters and require that they work one 24-hour shift during each month and perform the same duties as regular fire fighters. They also ride the apparatus. In spite of this activity they are dropping away.

I believe there should be conscription of auxiliaries, with penalties for failure to comply or participate.

J. A. Mayhew, Chief Engineer, Washington, D. C.: Our Civil Defense program is planned around the peacetime organization of the fire department. The chief engineer has been designated Deputy Director, Fire Services, of the Civil Defense group, by the District commissioners.

A dispersal plan has been put into operation which, upon receipt of a yellow alert, deploys fire companies equally over the entire area of the city. Mobilization points have been established around the outer edge of the city where both personnel and equipment will be mobilized after the attack. On-duty personnel are mobilized upon receipt of an alert; off-duty personnel and volunteer firemen are mobilized after the attack.

All emergency and static water supplies in the city have been charted. Technical training for all personnel has been completed in relaying water great distances from emergency supplies.

All personnel have received American Red Cross first aid instruction including the civil defense supplement.

We have written a "Fire Guard Manual" and are in the process of training guard instructors for the warden services.

Up to date we have been only partially successful in our efforts to recruit auxiliary firemen.

There are three things which should be done to make the Civil Defense program a success. First, the public must be awakened to the seriousness of the threat. Secondly, liability insurance for volunteers killed or injured in training as well as in performance of post-attack duties, must be provided. Thirdly, volunteer firemen must be provided with protective clothing.

Frank Vernotzy, Chief, Akron, Ohio: Our Civil Defense program includes all the phases of C. D. including a control room set up with regularly scheduled practice and training sessions.

We are part of a mutual aid program having signed contracts with fifteen separate fire departments in Summit County. We have excellent relations and working conditions with the departments surrounding the City of Akron.

Fifty men are now in training. Our training course is designed for leaders and trainers. We are endeavoring to train these men in such a manner as to enable them to assist the regular fire department instructors in the training of our reserves at a later date. Our police setup is identical to the fire setup. We intend to use these men in the training of the air raid warning unit which is being set up on a block plan.

We are experiencing some trouble due to the complacent attitude on

HERE IS THE TOPIC

1. **Has a Civil Defense program been initiated in your city?**
2. **Briefly, of what does it consist?**
3. **Is your fire department a member of a mutual aid group?**
4. **Have you endeavored to enroll, volunteer, or auxiliary members in your fire defense set-up?**
5. **Have your efforts been successful?**
6. **If not, what do believe would be the solution to this part of the program of Civil Defense?**

the part of persons whom we feel should be enrolled in a training class for C. D. work. Financial assistance is extremely hard to obtain. Our city council seems reluctant to pass any legislation which would assist us in the organization and training of the many civil defense units we feel would be necessary in the event of an emergency. The matter of insurance for our trainees is the one factor which is slowing up our training of reserve firemen and policemen.

The Federal and State Governments should set up some method whereby the cities would be able to formulate training courses, etc., in conformance with the amount of financial assistance they could expect. This is strictly the idea of those in our city government, not necessarily those of us in the fire department who are charged with the training of the C. D. units. We are at a loss to explain how any reserve or auxiliary units are going to be of any great amount of assistance to use at a time of a great fire emergency if they are not provided with the proper tools and apparatus which will certainly be necessary if an atom bomb is ever dropped in this vicinity.

Ninnian Higby, Chief, Detroit, Mich.: Our Civil Defense program briefly consists of the dispersal of from sixty-five to seventy per cent of our personnel and equipment to the perimeter of the city setting up an auxiliary communication center, a twenty-four training program for auxiliaries in all fire stations, a training program for mutual aid groups and also a training program for factory personnel, equipping all apparatus with two-way radio, together with an emergency operational plan for the different divisions in the department.

We found it was necessary to make personal contacts with the auxiliary firemen recruits. Using this method we signed over 17,000 auxiliaries in sixty days.

R. L. Lampley, Chief, Montgomery, Ala.: Our Civil Defense program consists of all units included in the tables of organization as published in the manual of Civil Defense by the War Department.

We are members of a mutual aid group.

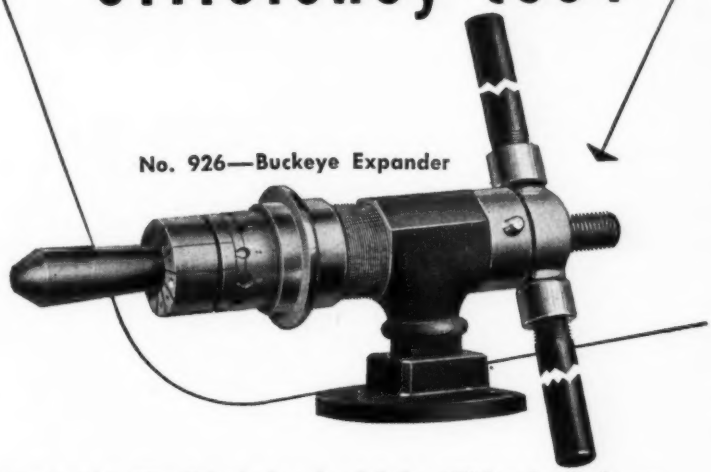
We have four companies of auxiliary firemen consisting of approximately twenty men each. The response has been fair due to the complacency of the people.

We feel that if more positive information would be given by the Federal Government especially as to equipment for us to work with, the people would think they meant business. We have not even been able to get warning signal equipment. The warning signals are the first things we should have in order to train the community in the recognition of these signals.

In other words, in my opinion, which is the opinion of the Advisory Committee of Civil Defense here, the complacency of our people is due to the failure of the Federal Government to give out more definite information.

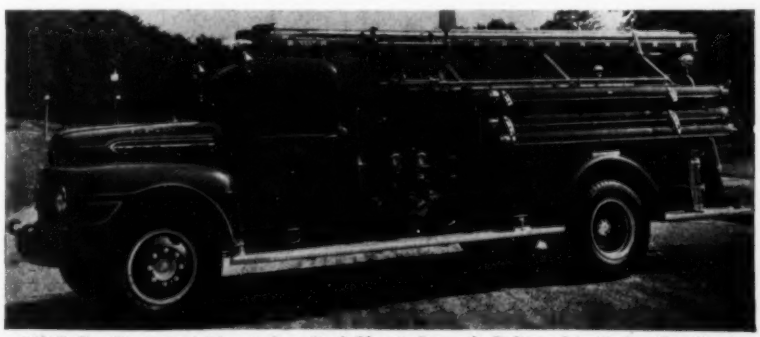
William Van Pfefferle, Chief, Camden, N. J.: We have instituted a Civil Defense program in this city. An air raid alarm system has been incorporated into our regular fire alarm system and air raid sirens have been

Expands efficiency too!



Here's why: Simplicity in functional design. With a simple change of segments, only one Buckeye Expander is required to expand rings for hose sizes from ¾" to 3" inclusive. Then, by merely turning the handle in the opposite direction, segments are automatically released for safe removal of hose and coupling. Easy to work, trustworthy and durable, Buckeye expands efficiency—only *one* required.

Buckeye
FIRE DEPARTMENT ACCESSORIES
BUCKEYE IRON & BRASS WORKS, DEPT. E, DAYTON 1, OHIO



500-Gallon Equipment Mounted on Ford Chassis Recently Delivered to Taylorville, Illinois
CENTRAL FIRE TRUCK CORP.
4437 Manchester Avenue, St. Louis 10, Missouri

installed on all fire stations and at various points throughout the city to warn the civilian population, off-duty firemen and policemen and the civil defense forces of an impending air raid.

We have established dispersal points to disperse all fire personnel and apparatus to outlying sections of the city in the event of an air raid warning. We have overhauled and repaired all reserve fire apparatus, mounting OCD skid pump units, still on hand from the last War, on trailers. We have established drafting points along the Delaware and Cooper Rivers in the event our water supply system is rendered useles by bombing.

We are members of a mutual aid group.

For an estimated requirement of 3,000 reserve firemen for this city, seventy-four civilians enrolled for training after the call was issued on January 28, 1951. Since that date, the attendance has steadily decreased until now we have thirty-seven men actively interested in the training program, despite all our efforts to hold their interest.

The solution to this, I believe, would require the following:

1. Provide compensation or liability insurance coverage for the reserve firemen to permit them to participate actively in the Bureau of Fire operations and have protection in case of injury.

2. Provide dress uniforms and protective clothing for these men.

3. Obtain a building or a vacated fire station, install reserve fire apparatus with the necessary furnishings, hose, tools and equipment.

4. Appoint officers from the best qualified reserve firemen as shown by their attendance, training records and aptitude.

5. Set up these reserve companies to operate under the rules and regulations of the Bureau of Fire and the supervision of the district chiefs in whose districts these companies are located. Arrange regular tours of duty for the officers and the men according to their leisure hours. Arrange fire alarm assignments for them to answer along with the regular companies of the Bureau of Fire, with the commanding officers of these reserve companies responsible for the care and maintenance of the stations, apparatus and equipment, discipline and training of the company personnel, in short, volunteer companies operating within the framework of the paid Bureau of Fire.

George E. McGaw, Chief, Fall River, Mass.: We are following the Massachusetts Civil Defense pattern.

We are a member of a mutual aid group on volunteer call.

Each member of the regular fire department is to get one auxiliary fireman. We could keep doing this until we secured the number required. We are starting to train fifty now.

The solution to the program of Civil Defense is very simple namely, money. Until the Federal Government, the states, cities and towns decide who is going to put up the money to finance the cost of equipping auxiliary firemen and furnishing additional equipment for fire departments, Civil defense is going to get a very slow start.

Dan P. Donahue, Fire Marshal, Peoria, Ill.: I shall endeavor to give you a brief outline of the formation and organization of the fire defense setup for our particular district.

To being with, we were invited to a meeting of a group of business men and we were asked to organize the Civil Defense fire department unit. We started from scratch and are still scratching, but we feel that at the present time we have the framework for an efficient fire fighting unit in our district.

About December 1st, we attended a meeting of the Peoria County Firemen's Association, explaining the need for organizing into a workable mutual aid fire assistance program and the response and cooperation were gratifying. At the present time our district has spread to five other counties covering an area of approximately thirty miles from the center of Peoria.

At the present time our mutual aid program includes 39 towns and will eventually be composed of 50 and their fire departments. It must be remembered that only three of these departments are paid departments and we are relying heavily on these volunteer fire departments for manpower and equipment.

In the formation of auxiliary firemen units not too much has been accomplished as interest has not been what it should be. Only 37 Peoria citizens have signed up as auxiliaries. In these volunteer fire departments we have the use of experienced firemen and a sizeable amount of equipment. As of the present time, no Federal or State aid has been given for the equipping of auxiliary firemen

EMERGENCY FLOODLIGHT TRUCKS

All Steel Enclosed

Deluxe CUSTOM BUILT EQUIPMENT

With or Without the Floodlighting Feature

THE SENIOR
(3 ton Chassis, 175" Wheel Base, 162 H.P.)

THE SENIOR SPECIAL
(5 ton Chassis, 201" Wheel Base, 200 H.P.)

THE STANDARD
(2½ ton Chassis, 158" Wheel Base, 143 H.P.)

THE X-L ECONOMY UNIT
(1½ ton Chassis, 158" Wheel Base, 108 H.P.)

All Models carry First Aid and Salvage Equipment as required by the customer.

The SENIOR MODEL—is equipped with exterior and interior compartments, stretchers, and seats for the crew. Five built for the City of New York; one with portable floodlighting equipment and four with 10 KW power takeoff driven generator and elevator controlled floodlights. Four built for the City of Philadelphia, Pa., one for Mount Vernon, N. Y., all with 10 KW generator and controlled floodlights.

The STANDARD MODEL—equipped same as above. This model in service in many Fire Departments for over 10 years.

The X-L MODEL—provides average facilities and portable generator and floodlights at minimum cost.

We can arrange to have you inspect these trucks. . . . We invite you to see the designs of our new SENIOR SPECIAL, now building for Rockville Centre and the City of Syracuse, N. Y.— the last word in Emergency Trucks.

Write us stating your requirements

APPROVED FIRE EQUIPMENT CO.
ROCKVILLE CENTRE • NEW YORK

and no equipment is available, such as boots, helmets, raincoats, etc., so we thought that it was best to utilize the volunteer fire departments to form a nucleus for the civil defense fire program at this time and to incorporate the auxiliary firemen at a later time.

Exclusive of the City of Peoria, our mutual aid assistance program has a total of 476 firemen at its disposal, 26 pumpers, 22 booster tanks, 37,100 feet of 2½-inch hose, 13,850 feet of 1½-inch hose, 7 inhalators and 12 water supply tanks, making a total of 13,760 gallons of water available at any given location.

Because Peoria is situated on the Illinois River and because these water supply tanks are capable of transporting 10,000 gallons of water, we believe that in the event of an attack and the water mains are damaged, we could keep a continual water supply available by relaying these tank trucks from the water supply source to the scene of the emergency. We also believe that these water supply tanks can serve a dual purpose, such as the furnishing of drinking water and for a medical water supply. We have also been informed by a large gasoline company that their regular gasoline trucks, if washed and flushed out, could be used for the transportation of water if the need arises. A dairy has also suggested that their milk tank trucks would be available.

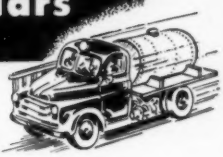
In our district, six dispersal areas have been assigned. These dispersal areas are away from the city proper. Three are located east of the river and three west of the river. In the event of an attack some provision must be made for the removal of fire fighting apparatus from the target area, for if you remain in the city you might become a sitting duck and it is common sense that if your equipment is destroyed in an attack, your usefulness as a fire fighting agency is ended. All fire fighting units in our district have been assigned to one of these six dispersal areas and from these areas they will be detailed to the critical area by the coordinator.

Since Peoria has a number of war plants, a great deal of emphasis has been placed on their protection and defense. Organization of their own fire brigades has been stressed and much has been done in regard to this respect. We are also at this time in the process of installing direct telephone communication from these war plants to our fire department alarm operator.

Several months ago the Peoria area staged the largest test of their operations. At the signal of alert, over 1000 civil defense workers and 150 airplanes went into action in 15 counties. The fire department units reported to their dispersal areas to work out the theoretical problem of fighting fires in a designated area.

No money is available for the equipping of auxiliary firemen, and without funds, interest will continue to lag. The Peoria Area Civil Defense Director has devoted a considerable amount of his time and personal funds to the organization of our particular setup and there is quite an expense involved. I believe that funds will have to be made available before you can set up an effective and efficient Civil Defense organization.

Build your own fire truck for a few hundred dollars



The time has come when rural fire protection should leave the "Fancy Dan" class so that every small community can do a real down-to-earth job of extinguishing fires rapidly, simply and inexpensively.

The nickel plate, red paint, gadgets and polish are good if you can afford them. But all you need for sound, economical fire protection is an Oberdorfer All Bronze Pump hooked up to the transmission of a dependable truck that carries a tank of water loaded with a good wetting agent.

Effective fire control starts just as soon as this outfit can reach its destination and a man can grab the nozzle end of the booster hose and get to the fire. The resulting penetrating stream of over 125 lbs. pressure is the fastest and most important phase of fire fighting.

Do you have a garage, a truck and a mechanic with a little common sense? We have the pump you need. Write for details.

OBERDORFER

BRONZE

ROTARY GEAR PUMP

No. 13—$85.00

Slightly higher West of Rockies

PERFORMANCE DATA—No. 13 PUMP SHOWN ABOVE

Pump Shaft R.P.M.	Pounds Pressure	Hose Length and Size	Dry Suction Lift in Feet	Vol. in Gal. Per Minute
1600	120	500'—1½"	15'	75

For complete specifications of this and other Oberdorfer All Bronze Booster Pumps, and name of your nearest distributor, write:

FIRE PUMP DIVISION OBERDORFER FOUNDRIES, INC., Syracuse, N.Y.

TRUMPET HYDRANT PUMPS

INEXPENSIVE • DEPENDABLE • EASY TO USE

Clamp type base locks securely to any pentagon or square hydrant nut. Pump operates smoothly and efficiently—saves both time and effort. Built to last a lifetime. Shaft is stainless steel, oscillating wings and valves are brass. Shell and pump lever are cast iron. Has many other uses such as emptying gas tanks, storage tanks or transferring liquids.

See Your Wooster Brass Representative or Write Direct.

HOSE BRASS GOODS WB LINE THE WOOSTER BRASS CO. WOOSTER, OHIO

THE WOOSTER BRASS CO.

WOOSTER OHIO

MANUFACTURERS OF A COMPLETE LINE OF DISTINCTIVE FIRE FIGHTING EQUIPMENT

Kindly mention FIRE ENGINEERING *when writing advertisers*

World Wide Fire News

By Roi B. Woolley

War Comes to California

War came to thousands of Long Beach, Calif., residents Sept. 9, 1951, as they awakened to the din of 50 caliber machine guns of an Air Force F51 Mustang fighter plane stationed at Long Beach municipal airport, firing out of control to spray a large section of the city with bullets.

To many of those awakened by the 5:45 A.M. firing, the screams of ricochets whining through residential streets, and lightning-like streaks of tracer bullets flashing through bedrooms of darkened homes, the 'invaders' had arrived.

The shooting occurred as a technical sergeant was servicing the armament on constant emergency alert, and was attributed to "malfunction of armament" (a short circuit) in the firing mechanism. Altogether, 576 rounds of ammunition were fired by the plane. Five of the plane's six guns exhausted their ammunition and the sixth stopped firing earlier only because it jammed.

There was no pilot in the plane at the time, the firing button on the plane's control reportedly being locked in the "off" position at the time. Some of bullets struck homes near the airport, but most of them came to earth about two miles away in an exclusive residential section. About 20 homes were reportedly hit, but fortunately, although there were many narrow escapes, no persons were injured. No fires were reported from the tracers.

* * *

Britain Is Shelter Conscious

It is disclosed that while this nation remains lukewarm or undecided about shelters for its citizens, Britain has quietly launched a civil defense program that is "honeycombing the ground under its major cities with atom-bomb shelters 100 feet deep."

It is said the plan for such shelters has been in existence for some time. Now, Britain has apparently given up hope of a peaceful atomic age and has begun putting the program into effect.

News of the shelter projects leaked when curious persons tried to learn why laborers were tearing up recently repaved streets in Central London. Onlookers discovered it was apparently no ordinary repair job. Foremen in charge of the projects admitted they were sinking deep shafts but were pledged to secrecy. Similar shafts were reported near No. 10 Downing St., home of the Prime Minister and center of a vast group of buildings.

* * *

Flaming Train Crash Kills 13

Thirteen persons, most of them Marines, died in the wreckage following a head-on crash between a Marine troop train and the Kansas City Southern Streamliner, the "Southern Belle," in the cotton and timber country of Louisiana, 60 miles northwest of Baton Rouge.

The crew of the troop train en route from Camp Lejune, N. C., to San Diego, Calif., is said to have ignored orders to sidetrack their train for the streamliner. The streamliner was bound for New Orleans. The 12-car troop train and the diesel driven passenger train were reduced to a jumbled mess, the ruins taking fire.

Approximately 60 injured, some critically, were rushed to various hospitals by rescue and other units hurriedly summoned. It was necessary to bring water to the scene to fight the fires. Wrecking crews with cutting torches, working with firemen, removed many victims.

There was no panic. Surviving, uninjured Marines formed rescue groups and set up guards. Tight security regulations prevented many of the details of the disaster from becoming known.

* * *

British Blasts Set "Worst Peacetime Fire"

Fire, characterized by the press as Britain's worst peactime conflagration, destroyed 14 large storage tanks and several smaller ones containing 12,000,000 gallons of oil and gasoline on the night of Sept. 6, last.

Troops joined hard-pressed British firemen to control the blaze, reported touched off by unexplained explosions at the Avenmouth oil storage area near Bristol.

A series of huge oil tanks in the compound at the Royal Edward docks blew up in billows of flame. Two men, who had been working on top of one of the tanks, were missing and presumed dead. As flames consumed the storages, a pall of black smoke blanketed Bristol, which is 6 miles northeast of Avonmouth, lying at the mouth of the Avon River and 110 miles west of London.

The Bristol Fire Brigade was parading through the streets in its annual

Every inch a RESCUE CAR for today's requirements

EVERY Gerstenslager Rescue Car is designed and built to meet the specifications of the individual public safety department. The master model illustrated above and below is typical of the engineering skill which makes every inch of space useful in carrying the respiratory apparatus, acetylene cutting equipment, litters, first aid materials, and other essentials of modern rescue operations. One of our field engineers stationed in your area will give you details on request. Write our main office.

The GERSTENSLAGER Co.

WOOSTER, OHIO *Established 1860*

inspection when the first explosion was heard about 3:00 P.M. Aid was brought in from miles around, it is reported, as the fire burned for hours. Nine tanks reportedly blew up in the first few minutes of the fire and by 10:00 P.M. the fire had spread to five more large tanks.

* * *

Pilot Follows Fire Engines to Safe Landing

First Lieut. Allen P. Murphy, Air Force pilot of New Richmond, Wis., was flying his Army L-19 Cessna monoplane on a night navigation training flight from the Air Force Base at Fort Bragg, N. C., to Fort Meade, Md., when he encountered bad weather, near Warrenton, Va. As he approached the Potomac River, the radio weather report predicted a 7-8 mile visibility and ceiling of 5,000 feet. He turned south, only to find fog getting worse. With his gasoline supply running low, at Calverton, near Warrenton, he began to look for a place to land.

Shortly after midnight, he spied the red lights of fire apparatus rushing to a blaze in the dairy barn at the L. W. Cassell farm near Calverton. He took off after the apparatus, and followed them to the blaze, then came down to a landing in a nearby pasture, which was lighted by the blaze sufficiently for him to see what the land looked like.

Murphy made a successful landing. The plane was undamaged. Incidentally, the barn was destroyed in the fire.

IRVING W. JOHNSON.

* * *

From the News Ticker

That our English cousins are having their own headache over civil defense is evidenced by a paragraph in "Fire" for Sept., 1951. It says "Without doubt, the Government's campaign to induce civilian volunteers for the CD organization—especially the arduous and dangerous section devoted to fire extinction—is "a gigantic 'flop'". . . . Atlanta, Ga. was Shriner-packed early in September, so much so, in fact, that a siren-wailing fire truck was held up at Peachtree and Forsyth streets one night for several minutes. Police, plus sirens, finally opened the way and the apparatus sped two blocks to carry out its asignment—dousing a fire on a garbage can. . . . Nine persons were killed, one injured severely Sept. 8, eight miles west of Drummondville, Que. in a head-on motor collision between a truck and a car which resulted in fire. Another truck and car crashed into burning wreckage of original crash. Victims burned to death when their car turned over and burst into flames after the collision with the truck. Accident occurred on the Trans-Canada Highway. . . . Six workmen were burned, four seriously Sept. 10, when an explosion and flash fire swept the forward hold of a Liberty ship being rehabilitated at the Old Cramp shipyards in Philadelphia. Cause—somebody lighted a cigarette in an area charged with paint fumes. . . . The worst fire on record in Bahia, Brazil, destroyed three blocks of buildings in the downtown section on Sept. 4, causing damage estimated at $3 million. . . . Adm. Lynde D. McCormick, commander of the Atlantic fleet, speaking at the recommissioning of the aircraft carrier Wasp, said atom bombs are becoming "smaller and more available"—so much so that they are likely to become standard weapon s on al U. S. aircraft carriers. . . . In Italy, two children, one 3 months and the other 3

KOHLER ELECTRIC PLANTS

Independent Source of Electricity

Portable and Mobile

Low-cost model for floodlighting and power tools. Increases fire-fighting efficiency and safety. Develops 1500 watts DC. Fits into small space, weighs only 75 lbs. Furnished with pilot light, four receptacles and double carrying handle. Two-wheel, rubber-tired hand truck available. Other models from 350 watts to 15 KW. Assure siren operation with a Kohler stand-by plant. Write for folder 24-A.

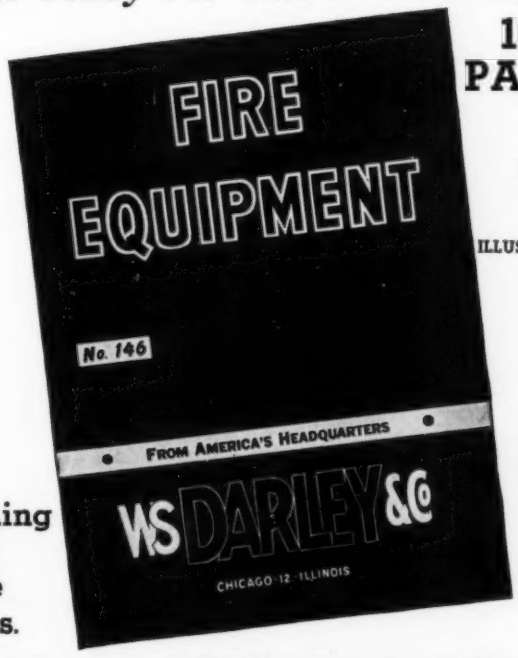
MODEL 1.5MS, 1500 watts, 115 volt DC. Manual control. Length 18", width 14", height 21".

Kohler Co., Kohler, Wisconsin. Established 1873

KOHLER OF KOHLER

PLUMBING FIXTURES • HEATING EQUIPMENT • ELECTRIC PLANTS
AIR-COOLED ENGINES • PRECISION PARTS

Write Today For This NEW Catalog



108 PAGES
—
1100 ITEMS
—
750 ILLUSTRATIONS

Everything for Fire Depts.

W. S. DARLEY & CO.

ESTABLISHED 1908 CHICAGO 12, ILLINOIS

BRUCO

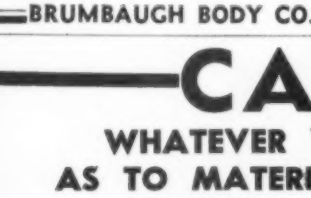
BRUMBAUGH BODY COMPANY ALTOONA PENNA.

Bruco fully enclosed squad and pumper. Carries 400 gallons of water. All compartments built to the company's specification to haul special equipment. Handy slide out racks for all portable equipment. Fully equipped with spot lights, blinker lights, turn signals and clearance lights. Write today for information on Squad Trucks, Emergency Trucks and pumpers.

BRUMBAUGH BODY CO., 100 W. Plank Rd., Altoona, Pa.

CAIRNS

WHATEVER YOUR PREFERENCE
AS TO MATERIAL, STYLE OR PRICE



REGULATION
OR
DROP BRIM

LEATHER

ALUMINUM

14
STYLES
TO
CHOOSE
FROM

PLASTIC

PRICES
TO SUIT
ALL
BUDGETS

Write for Catalog 331

CAIRNS & BRO., Inc.
ALLWOOD, CLIFTON, N. J.
Outfitters to Firemen Since 1836

Now is the time to order your new FIRE RECORD BOOK. We have sizes for large or small departments; also SECRETARY'S BOOKS and other forms.

HELMETS

years, were burned alive in bed when fire destroyed their farm at Rodi, near Messina on Sept. 5. Neighbors forcibly held back the father and mother who tried to dash into the flames to rescue the children. America is evidently not alone in the slaughter of the innocent by fire! . . . Brazil is considering trying artificial rain to combat forest fires in the states of Santa Catharina and Rio Grande, where many miles of forests were destroyed by fire and many lives lost. The fire, gaining impetus early in September threatened the rich pine forests of Santa Catharina. Coal mining in that region will cease if the fires are not controlled. One village has been wiped out and other communities are threatened. Heavy smoke has held up flying. . . . Mr. and Mrs. Leger Lapierre and five of their eight children burned to death Sept. 6 when fire swept through their new frame home at Sept. Iles, Que. The three eldest children, two daughters and a son, escaped by jumping from a window. . . . In Omaha Neb., eight persons were burned, three seriously, on Sept. 5, when a "dud" grenade exploded in a crowded apartment. Blast came when a National Guardsmen assured those present that the device was harmless, then dropped it to prove his point. . . . A circuit court judge approved settlement of $60,000 of a $289,000 claim for a boy who was maimed by a discarded fireworks bomb during the 1949 Gasparilla Pirate Festival in Tampa. The boy took the discarded bomb home and it exploded while he was playing with it. . . . An oil-well fire which burned fiercely for four days at Darmstadt, Germany, flickered out Aug. 7. Engineers said next task was to pull away debris around the well, created when fire undermined the derrick. Then they will try to cap the hole. . . . Four children were burned to death on Aug. 24 when an alcohol stove exploded in their Balanga home, Manila, P.I. Three other children and two adults were injured. . . . Civil defense officials in Chicago's suburban Evergreen Park decided that mere announcements of an organizational meeting might not turn out a big enough crowd. So 40 bombs were set off in sections of the town, and when excited citizens called the police and fire stations they were told to attend the meeting. Seems like this is the height of something or other.

Virginia Fire Chiefs Meet

B. J. Padgett, Alexandria, Va., fire chief was elected president of the State Fire Chiefs' Association of Virginia which met in Luray, August 6-7. Chief Padgett succeeds Chief R. L. Woolard of Norfolk.

Other officers elected were Chiefs John C. Long, Danville, and C. E. Carlton, West Point, vice presidents; Chief W. M. Mullins, Roanoke, re-elected treasurer, and Harold I. Baumes, Richmond, renamed executive secretary.

The following were named to the executive committee: Retiring President Woolard; Chiefs J. J. Cuddihy, Hopewell; Clay A. Easterly, Martinsville; M. K. Evans, Lynchburg, and Hugh R. Worley, Bristol.

The fire chiefs approved a resolution calling for a permanent fire instructional school, which has been conducted each year by the State Department of Education. The resolution proposed a full-

time instructor to work with the state's volunteer fire companies.

Richard D. Auerbach, special agent in charge of the Richmond office of the FBI, discussed "Communism in America." Other speakers included Executive Secretary Baumes who discussed trends in financing of civil defense; Deputy Chief W. J. Lewis of Norfolk who spoke on arson investigations and Chief Clay Easterly who reported on the 1951 fire college.

Tel-Aviv Has Costly Soap and Oil Factory Fire

A tremendous explosion shook the town of Tel-Aviv, Israel, on August 22, last. The blast originated in the "Izhar" oil and soap factory and was immediately followed by a fire which lighted the sky for miles.

Fire fighting forces from Tel-Aviv, Givathaiim, Ramath-Gan, Petach-Tikwah and Nathaniah converged on the burning factory, which is located in Nachlat-Itzchak, on the outskirts of Tel-Aviv.

By the time Moshe R. Hartmann, Chief Mechanic of the Tel-Aviv volunteer Fire Brigade, who was in charge of fire fighting operations for the first 30 minutes, arrived on the scene an entire wing of the factory had collapsed and flames were raging throughout the building.

The hydrant system of the plant was put out of business by the explosion and the fire forces had only a single hydrant left in service, and pressure was low in this. Firemen were forced to relay hose, using some seven hose lines, a distance of 1200 feet.

Upon the arrival of A. Kaspi, Fire Chief, and A. Ankori and E. Baron, leading fire officers, operations were directed toward preventing the blaze from reaching oil and hydrogen stores, and the main boiler house of the factory.

The main fire was fed by oil and kerosene, resulting in continual danger of further explosions of extractors, tanks and drums of the flammables. Both foam and high pressure fog were used to fight the blaze, the fire fighters reportedly having better results with the latter.

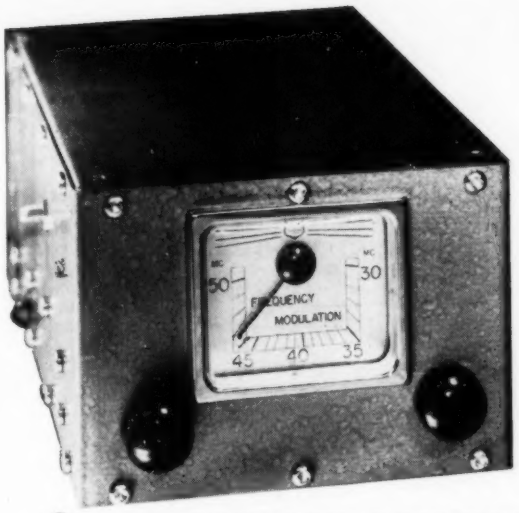
Two plant workers were injured at the outset and removed to the hospital, and three others from the night shift were reported missing. As soon as firemen got control of the blaze, search was started for these men.

The fire was under control 55 minutes after the explosion and was declared out 75 hours later.

Apparatus employed in the operations at this fire included 11 pumpers and one 50 ft. mechanical ladder. These were from the following Brigades: Tel-Aviv, 5 pumpers and ladder; Ramat-Gan and Givathaiim, each 2 pumpers; Petach-Tikwah and Nathania, each one pumper.

The missing three workers were later found dead under a large boiler and the two removed to the hospital later died. The estimated loss was reported at over a million dollars.

This fire was the largest experienced by Tel-Aviv since the war in 1948-49. The cause of the initial explosion, which was believed to have occurred in the cellar of the factory, is still undetermined.



Model M-51 $72.50

for emergency communications

USED BY HUNDREDS OF MUNICIPALITIES FROM BOSTON, MASS., TO ALHAMBRA, CAL.

POLICALARM MONITORADIO

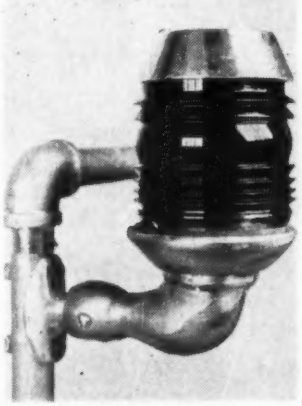
Says S. L. Grant, City Manager, Winchester, Virginia . . .
"I think you have a receiver that is well built, and I see no reason why it should not be in demand by all public works departments that have a transmitter available."

CITY OF WINCHESTER VIRGINIA

Users of FM 2-Way Radio Communications equipment throughout the entire nation, find Polic-Alarm and Monitoradio a welcome innovation to low-cost mobile communications radio . . . receiving units that every municipality can afford! With them, channel neighbors are monitored for pertinent information —all staff members are constantly alert to communications while driving on or off duty, or at home . . . Polic-Alarm and Monitoradio are invaluable to vital communications systems expansion and development.

5 Models For All Systems
6 VOLT MOBILE
M-51
Tuneable 30-50 MC
M-101
Tuneable 152-163 MC
RCC-1
Fixed Frequency in both bands
115 VOLT AC-DC
PR-31
Tuneable 30-50 MC
PR-8
Tuneable 152-163 MC
AIRCRAFT
AR-1
AM Tuneable 108-132 MC
115 Volt AC-DC

For Complete Information: See Your Jobber—Or Write Us Today
RADIO APPARATUS CORPORATION
55 N. NEW JERSEY ST., INDIANAPOLIS 4, IND., PHONE: ATLANTIC 1624



RAIL LIGHT
BRILLIANT — PENETRATING
360 Degrees of RED LIGHT

This genuine fresnel light shines like a lighthouse beacon! It has the very same type of lens. Here is the answer to ALL AROUND fire truck protection.
Ball and socket bracket permits four different mounting positions on vertical or horizontal hand rails. Mounted on the horizontal rail, it will clear ladders and hose.
Use them in pairs. Alternating flasher operates 21 CP bulbs.
$30.00 a pair with alternating flasher.
$16.00 each with 50 CP bulb and flasher.
IMMEDIATE DELIVERY

ARGUSLITE CO.
BLUE RIDGE SUMMIT, PENNA.

FIREWATER

the "Wet Water" that's

✓ **unconditionally guaranteed**

✓ **lowest in price**

✓ **absolutely non-corrosive**

FIREWATER* is the tested and proved chemical penetrant that actual laboratory tests have proved to be no more corrosive than distilled water . . . that is used at a dilution rate of 1:600 for maximum effectiveness . . . that is unconditionally guaranteed!

That's the story that is putting FIREWATER in a class by itself among "wet-water" compounds. FIREWATER will do the job—safely, efficiently, *and* economically.

Write *today* for more details.

FIREWATER COMPANY
1 First Street
Los Altos, Calif.

Please send me full information on FIREWATER.

NAME.....

ADDRESS.....

CITY & STATE.....

The FIREWATER Co.
1 FIRST STREET
LOS ALTOS, CALIF.

*Trade Mark

News of the Manufacturers

(*Continued from page* 837)

Chief Dick Kennison "Osmologist"

That's a title you're going to hear more and more as time goes on. Osmology is the science of deodorization—a new innovation adopted by the fire service to help reduce property losses from fire, smoke and odors.

Taking a hint from another Iowa fire chief who "osmologizes," Chief Chas. Slade of Des Moines, Chief Kennison had his first opportunity to try out his 'find' last July. It was only a small dwelling fire, but the removal of the pungent odors caused by burning of a plastic handle was so complete that the chief was encouraged to go further.

Since that time he has recorded use of his "Osmix 21" spray, manufactured by Airkem, Inc., 241 East 44th Street, New York 17, N. Y., at four representative incidents, one in Seerley Hall, a boy's dorm', Iowa State Teacher's College (cause, pipe ashes, which ignited furnishings); one in a home furnishings store (cause, cigarette dropped into pile of new rugs); one a frame dwelling (cause, lightning igniting wires and curtains), and one in a bank building. The latter actually was not a fire but a tear-gas accidentally set off by a burglar alarm. A smoke ejector also was used on this incident.

In all these emergencies, Chief Kennison reports odors were fully removed in a matter of minutes, eliciting praise from those whose occupancies were "deordorized" and so quickly made livable.

Kidde Adds Mechanical Foam to Line

Storage of flammable liquids for use in industrial production creates fire hazards that often are inadequately provided for. Month after month valuable plants go up in smoke for lack of effective extinguishing systems to combat fires originating with these fluids.

For years Walter Kidde & Company, Inc., producer of carbon dioxide systems, has provided industry with equipment to extinguish fires resulting from handling and storage of flammable liquids. To their line of industrial fire protection, Kidde has now added Mechanical Foam Systems, particularly suited to this type of hazard.

Generally, operation of a mechanical foam system depends on normal plant water pressure to draw, mix, and deliver the fire extinguishing agent. In large installations where main pressures would be inadequate to do the job, special pumping may be required.

The components of foam are water, foam liquid, and air. The basic mechanical foam system starts with water under pressure passing through pipes or hose lines. The velocity of the water creates a vacuum which draws the proper amount of foam liquid from its storage chamber into the stream. Further along, a second vacuum is created which pulls air into the water-foam solution. Then it is immediately "mixed", creating fire-smothering foam, and is discharged over the burning liquid from either manually controlled hose lines or fixed units.

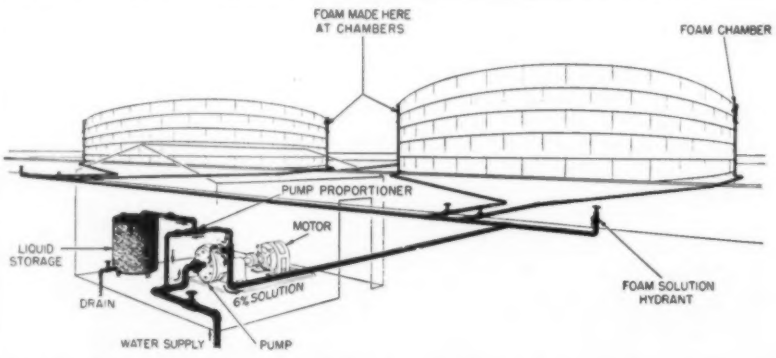
While requirements of a particular installation may vary the spacing between introduction of foam's elements, its mixing, and method of discharge, the same basic pattern is followed.

New Fire Detector

A new model fire detector, intended for protection of schools, hotels, hospitals and other occupancies, has been introduced by Fenwal, Incorporated, of Ashland, Mass. It operates on a principle described as "Rate Compensation".

New model functional design fire detector marketed by Fenwal, Inc.

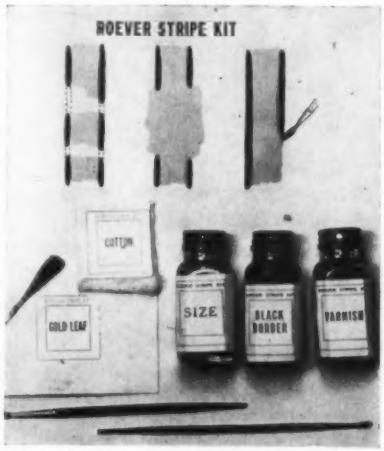
The fixture is unobtrusive when fitted into the ceiling and it can be installed within new or existing alarm systems or can be made to actuate an extinguishing system directly. It is called the Fenwal "Detect-a-Fire" and sounds an alarm when the air temperature reaches the temperature for which it is set. There is said to be no time-lag in operation. Temperature settings up to 325 deg. F. may be had. The unit is available for either normally open or closed circuits, and is reported to carry the approval of the Coast Guard and Factory Mutuals Laboratories and is listed by the Underwriters' Laboratories.



A typical Kidde mechanical foam installation for protection of tank stored, flammable liquids. The system is easily adapted to either large or small storage tanks.

Convenient Kit to Repair Apparatus Stripes and Letters

A bane of the fireman's life—if he's at all fastidious about the appearance of his apparatus, is to repair faded, broken, uneven gold striping and lettering on his vehicles.



To help solve this difficulty without sending the job to the paint shop, Charles E. Roever, 291 Washington Street, Hempstead, N. Y. has devised what he calls the "Roever Stripe Kit." The complete kit is contained in a box 5½ x 7½ inches, and includes, besides the simple instructions, the necessary gold leaf, brushes, sizing, varnish and border paint.

With this kit any fireman with little artistic ability can touch up damaged gold stripes and letters with genuine gold leaf, such as never could be done with gold paint.

Randolph Issues New, Helpful Extinguisher Guide

A new two-color, 12" x 22" poster, which quickly tells employees the correct fire extinguisher to use on rubbish, wood, inflammable liquid or electrical type fires, has just been released by Randolph Laboratories, Inc., Chicago, Illinois.

Ideal for posting in the plant at strategic locations, and for use in plant fire schools and employee lectures, the Randolph Extinguisher Guide illustrates all standard type fire extinguishers, and graphically explains the proper use for a soda acid, pump tank, foam, carbon dioxide, carbon tetrachloride, and dry powder extinguishers. The guide also indicates which extinguishers are subject to freezing, as a help in proper placement in heated and unheated areas.

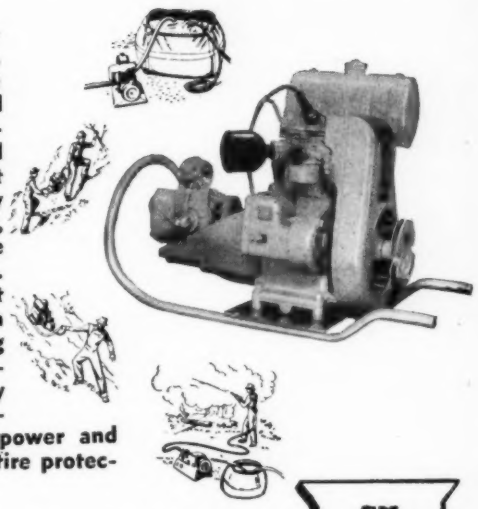
Truman's Bomb Cellar

President Truman reportedly has earmarked $881,000 for construction of a bomb shelter at the White House. Following hearings on the appropriation bill, at which the plan to build the shelter for the chief executive was disclosed, there was considerable comment among senators on the entire question of sheltering representatives of the government against enemy attack.

PACIFIC PUMPERS

AMERICA'S NO. 1 PORTABLE FIRE-FIGHTERS

The sure-starting WA-7, newest of the famous Pacific Pumpers and already an outstanding success in both private and public forest use, is light enough to be carried by hand to source of water, booster tank location, or fire area. It delivers 22 g.p.m. at 50 p.s.i. or 14 g.p.m. at 300 p.s.i., throws a high pressure fog for smothering tactics. Self-priming, positive displacement rotary pump, driven by 4-cycle air-cooled engine, gives you power and portability that mean real fire protection over a wide area.



Write for data on complete line of Pacific Pumpers, hose, accessories.

FIRE EQUIPMENT DIVISION

PACIFIC MARINE SUPPLY CO.

SEATTLE 1, WASHINGTON

DEPEND ON

ATTWOOD HARDWARE

Fire fighting is an exacting occupation. One mistake may be the last.

Likewise, the manufacture of fire fighting trucks is a very exacting business. Every piece of equipment must be dependable to eliminate any chance of mechanical failure.

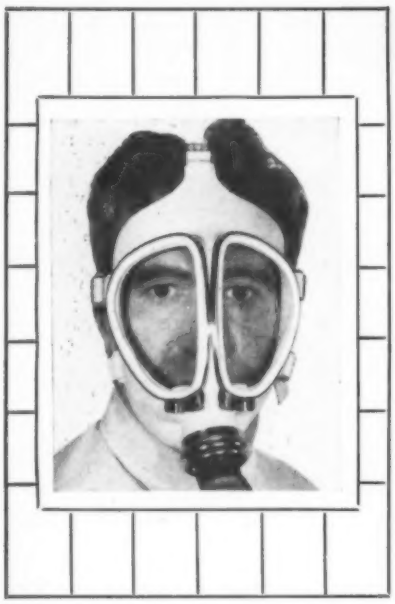
For many years Attwood has supplied over 90% of the fire equipment manufacturers with standard and special hardware and fittings.

Contact Attwood regarding the manufacture of equipment to your specifications.

ATTWOOD

BRASS WORKS

GRAND RAPIDS 4, MICHIGAN



ACME

the Only Gas Mask with the "PICTURE WINDOWS"

You never have that "jammed-in" feeling, wearing the Acme Full-Vision Gas Mask. Its patented, larger lenses are like picture windows, giving you full natural vision for that safe, unconfined feeling. When you walk, you can actually see your toes without bobbing your head. This factor alone makes Acme outstanding among gas masks . . . well worth looking into.

•

Write for complete story on Acme Gas Masks for all fire-fighting hazards.

•

ACME PROTECTION EQUIPMENT COMPANY

3037 WEST LAKE STREET
CHICAGO 12, ILLINOIS

What's Burning

THE following list includes fires of $10,000 loss and over in the United States and Canada for the month of September, 1951.

Month Ending September 30, 1951

Three Forks, Ala.—McCaleb cotton gin damaged. Tractor spark.

Arkadelphia, Ark.—Walgreen drug store; City Attorney's office; X-ray and surgical equip. in office of Dr. J. M. Morton; office of Selective Service and offices of Dr. M. N. Pate in business district, destroyed.

Warren, Ark.—Warren Motor Supply Co. destroyed.

Canoga Park, Cal.—Arcade Bldg. in Sherman Way, housing 10 stores and offices, including flower shop, telegraph office, dry cleaner, dress shop, five and ten cent store, telephone company office, appliance store, furniture store, dairy products store and law office, destroyed.

Oakland, Cal.—Apt. house damaged.

San Jose, Cal.—Larson Ladder Co. destroyed. Air compressor.

Sonora, Cal.—Cold Springs Chalet, 27 miles east on Highway 108, destroyed.

Branford, Conn.—Cattle barn on Sachs Bros. farm on Cherry Hill, destroyed.

Bristol, Conn.—R & F Specialty Shop destroyed.

Middletown, Conn.—Whse. of EIS Mfg. Co. on River Road, damaged.

Jacksonville Beach, Fla.—Kay's Restaurant; Ocean Beach Liquor Store, Beach Bootery and pool room, all in adj. bldg., damaged. Dynamite.

Atlanta, Ga.—Bldg. housing office and storage dept. of Rubin & Scheinbaum, Atlanta Paper Products, Specialty Workers Union, Local 527, AFL, and starage dept. of Lee Soda Co., heavily damaged.

Augusta, Ga.—General grocery store and whse. on Highway 28, destroyed.

East Point, Ga.—Dixie Printing Ink Co. plt. destroyed.

Boise, Ida.—Three-story office bldg. damaged. Losses included J. C. Penney store.

Boise Ida.—Sonna bldg. occupied on first floor by J. J. Newberry stores, damaged.

Boise, Ida.—Tennyson Transfer & Storage Co., contents, destroyed. Explosion.

Lewiston, Ida.—Nez Perce roller mill and whse. on Snake River Avenue, destroyed.

Chicago, Ill.—Fire communicated from Chicago Trailer Co. to Prayer Garden Church, to junk shop of M. Zaransky & Sons; to bldg. owned by Mr. Zaransky and dwellings of J. Gordon and H. Smith, to filling station, to garage and to another dwelling.

Chicago, Ill.—Bldg. occupied by George E. Fox Co., mfrs. of office equip.; communicated to bldg. owned by Continental Art Co., lamp factory, damaged.

Chicago, Ill.—Chewing gum flavoring plt. destroyed. Lightning.

Danville, Ill.—Bldg. housing Letter Press Shop destroyed.

Wood River, Ill.—Shell Oil refinery damaged. Explosion.

Bloomington, Ind.—Monon Stone Co. limestone mill destroyed.

Albion, Ind.—Stull's dept. store on south side of Courthouse Square and adj. Riddle & Metz. hardware store and Albion Natl. Bank, damaged.

Indianapolis, Ind.—Barn at Indiana State Fairgrounds destroyed. Cigarette.

Indianapolis, Ind.—Hawthorn Room, restaurant, damaged. Overheated water heater.

Burlington, Ia.—Bldg. housing Shelby Produce Co. damaged.

Guttenberg, Ia.—Bldg. occupied by clothing store owned by Clifford Frommelt and bldg. occupied by Harry Steffler meat market, destroyed.

Vinton, Ia.—Two sheds and office of Ellis McDowell Lumber Co. yd., destroyed. Defective wiring.

Colby, Kans.—Grain elevator and storage bldg. of Thomas County Co-operative Assn. destroyed.

Kansas City, Kans.—Scottish Rite Temple badly damaged.

Bloomfield Hills, Mich.—Mansion of Mrs. Francis Palms destroyed.

Bowling Green, Ky.—Border Pure Milk Co. plt. destroyed. Gasoline tank explosion.

Grayling, Mich.—Bear Archery Co. factory damaged.

Sturgis, Mich.—Citizens Lumber & Coal Co., Inc., yd. destroyed.

Cleveland, Miss.—Producers Gin and 17 bales of cotton destroyed.

Tupelo, Miss.—Long's Laundry & Cleaning plt. and Tindall's Auto Parts Co. destroyed.

Boonville, Mo.—Downt wn garage and furniture and home appliance whse. destroyed. Explosion.

Morning Pride

FIRE SUITS

Rubber or Duck
FLEECE LINED

•

NEW DOUBLE DUTY CHEST PROTECTOR

For Summer fold together and snap to coat.

For Winter unsnap for full protection of chest.

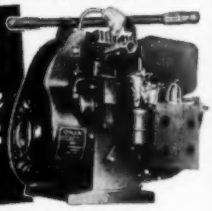
SUSPENDERS
MITTENS
GLOVES
DETACHABLE LININGS

See Your Local Dealer or Write
MORNING PRIDE MFG. CO.
1986 HOME AVE., DAYTON 7, OHIO

Floodlighting

WHERE YOU NEED IT!

ONAN *Portable* **ELECTRIC PLANTS**



EASILY CARRIED
Lightweight and compact, Onan Electric Plants can be hurried to the spot where needed. Supply current for floodlights, electric saws, drills and other tools. Always ready for instant use.

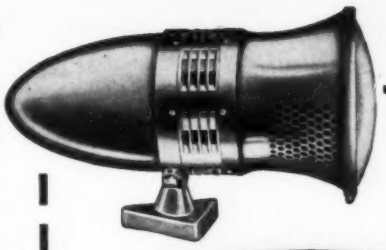
FIT INTO SMALL SPACE
Compact, self-contained Onan Electric plants can be ordered as standard equipment with many makes of new fire trucks. Just a few square inches of mounting space required for installation on old trucks.

Write for **FREE** *Folder!*

Special folder describes many lightweight models for fire department use. D.C.: 750 to 5,000 watts. A.C.: 400 to 3,000 watts. Large, water-cooled plants for emergency operation of signal systems to 35,000 watts.

D.W. ONAN & SONS INC.
5687 University Ave., Minneapolis 14, Minn.

Gashland, Mo.—Nashua Mfg. Co. plt., a mile west of U. S. Highway No. 169, destroyed.
Ridgeway, Mo.—Ridgeway Consolidated School destroyed.
Billings, Mont.—Occident elevator, three whses., a feed mill, office and retail store, destroyed.
Fabyan, N. H.—Fabyan House, a hotel, destroyed.
Bound Brook, N. J.—Freight house and three box cars of Lehigh Valley Railroad damaged.
Binghamton, N. Y.—Municipal Auditorium Bldg., 3-story brick converted armory, occupied by New York State Institute of Applied Arts and Sciences, destroyed. Two adj. bldgs. housing the New York State Employment Service and the Southern Tier Electrical Supply Co., damaged by collapsing walls and flying debris.
Brooklyn, N. Y.—National Metal-Art Mfg. Corp., mfrs. of metal frames and cabinets, and Titian Printing Co., textile printers, considerably damaged.
Cambridge, N. Y.—C. A. McGhee Co. lumber yd. destroyed.
Fayetteville, N. Y.—Stedford Chemical Co. destroyed. Explosion.
Hollis, N. Y.—Igoe Bros. Storage Whse. destroyed. Children playing with matches.
New York, N. Y.—Bldg. occupied by Louis Guttenberg, theatrical costumes; Columbia Clothing Co., dealer in children's clothing; Bonnie Doll & Toy Co.; Capitol Sportswear; Kreshner, Inc.; Capitol Coat Front Co.; Wilmart Products Corp., mfrs. of closet accessories; Ruby Luggage Corp.; Textron, Inc. and Posses, Inc., considerably damaged.
New York, N. Y.—Bldg. occupied by Kingston Shoulder Pad Co.; Charles B. Dillingham Post 16-5, as club rooms; York Cleaners and Tailors and Laundry; Habana, as restaurant bar and grill; Stank Luncheonette; Aisenberg jewelers; Hotel and Restaurant Workers Union; Penart Fashions, mfrs. of ladies' dresses; Barbara Button Co., jobber in buttons; Perfect Button Co., jobber in buttons; Famous Frocks, Inc., mfrs. of ladies' dresses; Nuko Trading Co., contractors in ladies' fur trimmed coats; goods on premises of Nuko Trading Co. owned by Clyde Fashions; A. Alpar and E. Solmor Co. damaged considerably.
North Lawrence, N. Y.—Garbage disposal plt. serving five towns, destroyed.
Rochester, N. Y.—Sixteen alleys in Bowlodrome bowling hall, destroyed. Explosion.
Rochester, N. Y.—Rochester Paper Products Co., Inc., whse., damaged.
Voorheesville, N. Y.—One section of a U. S. Govt. whse. destroyed and two others damaged.
Greenville, N. C.—Local distributing plt. of Sinclair Refining Co. and tank car of gasoline damaged. Spark of static electricity.
Maxbass, N. D.—Drug store operated by Ted Scully and Roundup Tavern destroyed.
Dayton, Ohio—Moran Paint plt., three miles east, destroyed.
Defiance, Ohio—Bond Furniture Co. damaged. Defective wiring.
East Palestine, Ohio—East Palestine Lumber Co.'s storage bldg., trucks, milling equip. and supplies, destroyed.
Suffield, Ohio—Garage owned by Claude Fox, including automobile, pickup truck, damaged; also tractor, semi-trailer, damaged.
Youngstown, Ohio—Duca Degli Abruzzi Lodge Hall damaged. Defective motor in refrigeration system.
Wilburton, Okla.—Industrial Arts bldg. at Eastern Oklahoma A. & M. College, destroyed.
Brownsville, Ore.—Mill Forest Products Co., destroyed.
Grants Pass, Ore.—Sunny Brook hop yd. plt. and 265,000 pounds of dried hops destroyed.
Medford, Ore.—Lake on Woods Resort destroyed.
Medford, Ore.—Medford Armory destroyed.
Hooversville, Pa.—Hooversville Supply Co. genl. store and super market destroyed.
Reynolds, Pa.—Atlas Powder Co. mixhouse destroyed. Dynamite explosion during flash fire.
West Willow, Pa.—Potato Chip factory owned by James Herr, destroyed.
Humboldt, Tenn.—Gulf, Mobile and Ohio Railroad's fruit packing shed destroyed and 10 other bldgs., including a whse. damaged.
Nashville, Tenn.—Concrete Mfg. & Supply Co. damaged. Steam generator.
Trenton, Tenn.—Farmers Cotton Gin destroyed.
Bowie, Tex.—City block consisting of Garrett Furniture Co., Bowie Weekly News, Bowie Wholesale Grocery Co., Ira Cafe, Bowie Bakery and steam laundry, destroyed.
Shenandoah, Va.—Grive Hill Milling Co., structure and store connected; bldg. had been used for poultry purposes, destroyed.
Crockett, Tex.—Convalescing home and hospital, four miles west, destroyed.
Odessa, Tex.—Safeway Super Market destroyed.
Terrell, Tex.—Ranger Boot and Shoe Co.'s plt. off Kaufman-Terrell Highway, destroyed.
Vernon, Tex.—Main bldg. at H. G. Leonard Co. destroyed.
Richmond, Va.—Richmond Cinder Block Co., near Acca, Henrico County, destroyed. Spontaneous ignition.
Aberdeen, Wash.—Ultican sawmill destroyed.



MODEL 20 SIRENLITE for Emergency Vehicles

Siren sounds a penetrating warning, red light automatically flashes authority. Traffic opens instantly, day or night. FREE ROLLING feature.

STERLING SIRENS

■ HANDSOME
■ RUGGED
■ RELIABLE

Built by proud craftsmen to the highest standards of precision manufacturing . . . utilizing materials of finest quality . . . Sterling Sirens give year-after-year of unsurpassed dependability and satisfaction.

MODEL M GENERAL FIRE ALARM SIREN for Volunteer Systems

Quick acceleration, power-plus . . . Model M really gets the boys out in a hurry! Used by championship companies from coast to coast. A dependable, heavy-duty siren built of the finest materials throughout.

Complete line of Siren Equipment • *Bulletin on Request*

THE STERLING SIREN FIRE ALARM CO., INC.
58 ALLEN ST., ROCHESTER 6, N.Y.

Try this Pump QUIZ!

1 What's the *only* two-stage pump on the market with one-point lubrication?

2 What two-stage pump *in one unit* gives you high volume at normal pressure . . . normal high pressures . . . and extremely high pressures for fog-guns at *moderate engine speeds?*

3 What pump handles dirty water without damage at either low or high pressure?

4 What's the *only* two-stage pump with *all* bearings running in oil inside *one* automotive-type transmission housing?

5 What pump in a single housing has *two* impellers, each *independently* shafted and geared to run alone if desired, or together when needed?

Answer (to all 5 questions above): The outstanding Barton-American Duplex-Multistage Centrifugal Fire Pump. *No other* two-stage pump is so versatile—*no other* will give more dependable service.

AMERICAN-MARSH PUMPS
BATTLE CREEK MICHIGAN
U.S.A.

Canadian Sales Representative:
C. E. Hickey & Sons, Ltd.
Hamilton, Ontario

Get the Complete Story—Write for Bulletin 8733

Canadian Apparatus Plant:
American-Marsh Pumps (Canada), Ltd.
Stratford, Ontario, Canada

For VALUE...

Specify HALE

Why do users of Hale Fire Pumps specify "Hale Pump" when they buy new apparatus?

Because these men have learned through practical experience HALE VALUE in terms of:

• Dependability • Flexible Performance • Efficiency

For 36 years Hale-equipped Fire Pumpers have upheld a high standard of dependability . . . a dependability that has won the respect of users all over the world. Hale Fire Pumps are sold only through Manufacturers of quality apparatus.

HALE FIRE PUMPS are built in all STANDARD CAPACITIES

Write today for NEW FOLDERS on Hale Fire Pumps . . . built in all standard capacities.

HALE FIRE PUMP COMPANY
CONSHOHOCKEN, PA.

BOOKS

For the Modern Fire Fighter . . .

Recognized by the Fire Service as Standard

Questions and Answers for Lieutenant and Captain—$2.50

Promotional Study Course for Firemen—$3.00

Fire Chief's Handbook—$4.00

Fire Service Hydraulics—$3.00

(The Above Prices Are All Postpaid)

CASE-SHEPPERD-MANN PUBLISHING CORP.
24 West 40th Street
New York 18, N. Y.

PROTECT
YOUR EQUIPMENT

Flash 'N Wag

Flashing, oscillating WIG-WAG Redhead beam quickly clears the driver's side of the road as well as warning those approaching. Sends powerful signals 1,000 feet ahead. Visible for miles.

Safer, faster, quieter runs. 6" and 8" diameter sizes. Write or Folder.

CARPENTER MFG. CO.
200 Master-Light Bldg.
BOSTON-45-SOMERVILLE
MASSACHUSETTS

Raritan Arsenal poster dramatizes Fire Prevention Week

The Raritan Arsenal Fire Department — F. Vaugoin, Chief — used a colorful, striking poster designed and painted by Fire Inspector Gene Geiber of the Department, which has attracted much interest.

Bellingham, Wash.—Strand Sawmill destroyed.
Darrington, Wash.—Darrington Theatre, tavern and shoe repair shop, destroyed.
Everett, Wash.—Olson Lumber Co., stock and machinery, destroyed.
Forks, Wash.—Twenty-one homes, Forks garage, machine shop, destroyed. Forest fire.
Forks, Wash.—George Beck sawmill destroyed. Forest fire.
Seattle, Wash.—Shorward Apts., Mercer Island, damaged. Cigarette.
Stevenson, Wash.—Stevenson Lumber Co. destroyed.
Yakima, Wash.—Wilfred Revard Hop Ranch, 50,000 pounds of hops, destroyed.
Clarksburg, W. Va.—First Methodist Church and adj. minister's dwelling destroyed.
Penticton, B. C.—Hub bldg. housing restaurant, confectionery, bowling alleys, billiard parlor and taxi office, destroyed.
Vancouver, B. C.—Yukon Lumber Co., stock machinery, destroyed.
Cache Bay, Ont.—International Nickel Co.'s huge George Gordon sawmill, destroyed.
Hamilton, Ont.—Whse. filled with bldg. supplies at Barton Lumber & Supply Co., destroyed.
Hespeler, Ont.—Bldg. housing Hall Foundry Co., Ltd. and Standard Castings and Mfg. Co. damaged.
Toronto, Ont.—Bldg. housing a restaurant, Rotman's men's wear, Wellt's delicatessen, Tel Aviv barber shop, Helfont shoe repair, G. Greenspan poultry shop, dental laboratory, Toronto Labor Council offices and CIO Steelworkers Union office, damaged. Boiled over kettle.
Toronto, Ont.—Lyon's furniture whse. destroyed.
Joliette, Que.—Hotel St. Louis and adj. bldg. housing fur store, leather goods store, offices of two lawyers, insurance brokers and two private dwellings, damaged.
Montreal, Que.—Laval-Sur-Le Lac Golf Clubhouse, 15 miles out, destroyed.
Montreal, Que.—Wednesday Cleaners' cafeteria destroyed.
Port Daniel, Que.—Hotel Lafayette, five dwellings and some cabins, destroyed.

Heavy nearby explosions will be unable to blow entire windows, frame and all, into a room, if of the new type "bomb window" developed by the Pittsburgh Plate Glass Company of Pittsburgh. The bomb-proof window contains a glassplastic laminate which opens by folding about its edges.

Questions and Answers

Static and Dynamic Head; Horsepower

To the Editor:

The problem along with other information, that I wish to submit is very similar to example 192, page 202, "Fire Service Hydraulics," which I would prefer to alter or change slightly, with a few things added. The problem concerns mostly water and engine horsepower, etc.

The weight of one gallon of water will be taken at 8.35 lbs., atmospheric pressure at 14.7 lbs.

A pumping engine is powered with a 200 H.P. (gross horsepower). The accessories account, for example, for 20 horsepower, that is such as water pump, fan, generator, etc., thus leaving a net horsepower of 180.

Example No. 1. A pump is discharging 1,000 g.p.m. against a pressure of 150 lbs. p.s.i. The lift is 10 feet from water level to dead center of pump intake. Water horsepower equals 1,000 g.p.m. times 8.35 lbs., the weight of one gallon of water, or 1000 × 8.35 lbs. = 8,350 lbs. per minute. A pump pressure of 150 lbs. p.s.i. is equivalent of a head 150 × 2.304 feet equals 345.6 feet. Thus work done results in 8,350 × 345.6 ft., equals 2,885,760 foot pounds per minute, divided by 33000 ft. pounds or one horsepower which equals 2,885,760 divided by 33000 = 87.44 H.P.

Suction lift equals 1000 g.p.m.; a 10 foot head equals approx. 6.4 pounds (note, at this point I am not so sure as to how accurate the 6.4 lbs. are). Thus 6.4 lbs. × 2.304 ft. = 14.7456 feet. Therefore work done equals 8,351 lbs. per minute times 14.7456 ft. equals 123,140.5 ft. lbs. 123,140.5 divided by 33000 = 3.7 horsepower.

Now it appears that 87.44 + 3.7 = 91.14 water horsepower. 91.14 W.H.P. subtracted from 200 gross H.P. equals 108.86 H.P.

Net horsepower less 20 H.P. (for accessories) equals 200 minus 20 equals 180 net H.P. Water horsepower equals 91.14 or 180 N.H.P. equals 180 — 91.14 = 88.86 N.H.P.

Question: when making a lift of 10 feet, pumping 500 g.p.m. employing 20 ft. of 4 inch engine suction, atmospheric pressure of 14.7 lbs., how many inches of mercury are required for both for a 10 foot static and dynamic lift? I would also like same information for a lift of 750 g.p.m., 4½ inch suction, 20 ft. length. An 800 g.p.m.,

OREN

FIRE APPARATUS

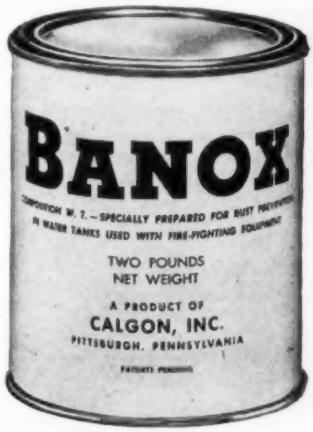
CUSTOM-BUILT APPARATUS

Available in a Complete Range of Power and Pumping Capacities

OREN ROANOKE CORP.

ROANOKE 16, VIRGINIA

STOP TANK RUST WITH BANOX*


BANOX
COMPOSITION W. T. — SPECIALLY PREPARED FOR RUST PREVENTION IN WATER TANKS USED WITH FIRE-FIGHTING EQUIPMENT
TWO POUNDS NET WEIGHT
A PRODUCT OF
CALGON, INC.
PITTSBURGH, PENNSYLVANIA

Now you can prevent costly rust or corrosion in your water tanks with new Banox (Composition W.T.). Specially developed to protect fire-fighting equipment, Banox has proven effective in preventing corrosion in all kinds of metal water tanks . . . in all types of water.

Here's what **BANOX** *does...*

- ★ Controls rust and corrosion scale in pumper and booster tanks and other water storage and hauling tanks used for fire protection.
- ★ Prevents clogging of fog nozzles due to rust and corrosion scale.
- ★ Reduces costly repairs and replacement of tanks . . . helps keep equipment clean and ready for instant use.
- ★ Effective in iron, steel, galvanized or painted tanks . . . with any type of water—hard or soft, stagnant, brackish or sea water.
- ★ Non-combustible . . . Non-toxic!
- ★ Harmless to the skin and clothing, to copper, brass, rubber, wood, paint and fabrics.
- ★ Banox is compatible with "wetter" water.

BANOX is economical and easy to use. One pound per 100 gallons of water — *one dosage protects the tank until the water is used.* Banox, Composition W.T., is especially prepared and packaged for use in water tanks of fire-fighting equipment.

*T. M. Reg. U. S. Pat. Off.

CALGON, INC., HAGAN BUILDING, PITTSBURGH 30, PA.

FAIRBANKS-MORSE
GENERATING SETS

Power failure can start a lot of trouble for theater operators, hospitals, institutions, churches, schools, police, fire and other municipal departments. Injuries, loss of life, and property damage can lead to costly lawsuits.

Install a Fairbanks-Morse Generating Set for quick power during emergencies. Available in a capacity to meet your needs. Write Fairbanks, Morse & Co., Chicago 5, Ill.

FAIRBANKS-MORSE,
a name worth remembering

BODY-GUARD
BUNKER SUITS
FOR COMFORT & PROTECTION

WE ARE DISTRIBUTORS FOR
SIREN BOOTS
We have been supplying FIREMEN'S CLOTHING for over 25 years.

Any fireman can have a catalog by writing —

BODY-GUARD
MANUFACTURING CO.
ST. JOSEPH - - MISSOURI

5 inch suction, 20 foot long, and a 1000 g.p.m., 5 inch suction, 20 ft. long.

Would you please furnish me the formula for computing the difference between static and dynamic head, both in inches of mercury and its equivalent in pounds. (The dynamic that I refer to is the friction loss in suction hose and strainer plus velocity head.)

Answer: Your solution in determining the water horsepower of a pumping engine is correct except that portion relating to the power required to lift water ten feet by suction.

You do not state the size of suction, but assuming it is of 5-inch diameter, the static and dynamic heads combined would total 8.5 pounds approximately.

This figure is secured from the following table and formula adapted from Bulletin No. 255, issued by the National Board of Fire Underwriters on November 15, 1947:

500 gallon..	6 feet (+1) for 4 "	
	3½ feet (+ ½) for 4½"	
600 gallon..	8½ feet (+1¼) for 4 "	
	4½ feet (+1) for 4½"	
750 gallon..	7 feet (+1½) for 4½"	
	4½ feet (+1) for 5 "	
800 gallon..	5½ feet (+1) for 5 "	
1000 gallon..	8 feet (+1½) for 5 "	
	4 feet (+ ½) for 6 "	
1250 gallon..	6½ feet (+ ½) for 6 "	

Example: 1000-gallon pumper, 9 foot lift, 20 feet of 5-inch suction

$$\frac{9 + 8 + 1\frac{1}{2}}{2.31} = 8 \text{ pounds}$$

Using the above formula, and assuming that two sections of suction hose are used for the 10-foot lift, we have the suction head equalling

$$\frac{10 + 8 + 1\frac{1}{2}}{2.31} = 8.5 \text{ pounds approximately}$$

To convert this to feet, we multiply by 2.304, securing 19.584, or 19.6 feet approximately.

$1{,}000 \times 8.35 \times 19.6 \div 33{,}000 = 4.96$ horsepower

This figure for the horsepower represented to lift water through the two lengths of suction hose to a height of 10 feet will, of course, change the balance of your answer.

It should be pointed out that water horsepower of a pumping engine is not the engine horsepower. The water horsepower is determined in the manner indicated by your solution, while the horsepower of the motor itself is usually determined by the use of an electric dynamometer. The horsepower of the motor is, naturally, greater than the water horsepower, for the efficiency of the pump, friction, etc., must be taken into account.

Answering your question relative to a lift of 10 feet, pumping 500 gallons per minute and employing 20 feet of 4-inch suction, we find the lift in pounds as follows:

$10 + 6 + 1 \div 2.31 = 7.4$ pounds.

This is the pressure in pounds per square inch represented by the dynamic and static heads of the suction line.

To determine how much of this total is due to static lift and how much to dynamic lift, we subtract the static from the total and we get the dynamic lift. The static lift in pounds per square inch will be $10 \times .434$, or 4.34 pounds.

McINTIRE GATE VALVES

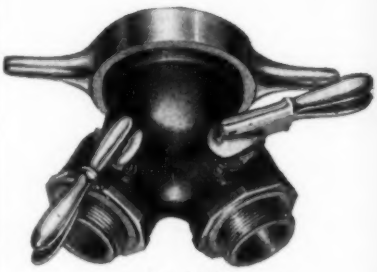


Fig. 164AN
4½" swivel female x two 2½" male Gated Siamese. Quick opening, ¼ turn valves.

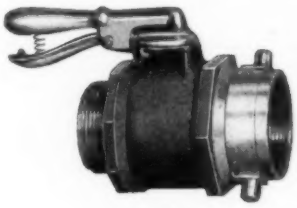


Fig. 163
Made either Right Hand or Left Hand 2½" male x female, gate valve.

F. N. McINTIRE BRASS WORKS
BOSTON, MASS.
1837 - - - - - - - - - - - - - 1951

BAR-WAY
HOSE COUPLINGS
FOR ¾" AND 1" BOOSTER AND HIGH PRESSURE FOG LINES

STREAMLINED
FULL FLOW
INTERNAL EXPANSION
ACCURATELY MACHINED
REMOUNTABLE

For maximum efficiency, economy and protection specify Bar-Way couplings attached to hose of proper size. Endorsed by leading hose manufacturers and demanded by more and more fire departments.

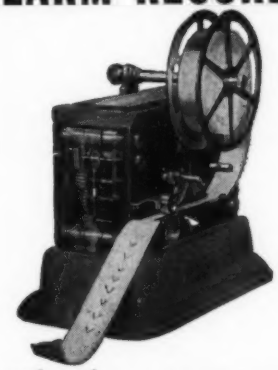
BAR-WAY MFG. CO., STAMFORD, CONN.
WEST COAST REPRESENTATIVE:
W. D. RIGDON
383 Brannan Street San Francisco 7

MEMCO
AERIAL LADDER

May be installed on existing trucks or you can have one installed on new equipment you are buying. Write for details.

DE-LUX NEON MFG. CO.
1007 N.W. 36th Street
OKLAHOMA CITY 3, OKLA.

Accurate
ALARM RECORDS



with the **HARRINGTON**
PR-10 FIRE ALARM

This punched tape register automatically makes records of fire alarms or other emergency signals as transmitted over circuits in central fire alarm stations, outlying fire stations, police department offices, water works, etc. Also fire alarm boxes, gongs, alarm panels, etc.

HARRINGTON
SIGNAL COMPANY
MOLINE . . . ILLINOIS

The dynamic lift will be 7.4 — 4.34 = 3.06 pounds.

One pound per square inch represents 2.04 inches of mercury. Thus to change the pounds per square inch in pressure to inches of mercury, we proceed as follows:

Dynamic lift: 3.06 × 2.04 = 6.24 inches mercury

Static lift: 4.34 × 2.04 = 8.85 inches of mercury

Following the above methods, you can readily determine the values of static lift and dynamic lift in inches of mercury for the various capacities and sizes of suction given in your problem.

Discrepancies in Hydraulic Formulas

To the Editor:

I would appreciate very much having you explain to me Example 137, on Page 112 of "Fire Service Hydraulics."

I believe it to be impossible to have a nozzle pressure of 26.38 pounds per square inch on each nozzle, with engine pressure at only 250 pounds. My reason for believing this is that at 26 pounds nozzle pressure, each nozzle is delivering 151 gallons per minute, which means that 302 gallons per minute is being delivered through 1227.78 feet of 2½-inch hose. The friction loss in 1227.78 feet of 2½-inch hose carrying 300 gallons per minute is 260 pounds. Therefore I believe a different formula should be used to find the correct answer to this and like problems.

C. E. M.

Answer: The discrepancies encountered in the solutions of some problems for engine and nozzle pressures, particularly where lines are branched, and combined, are brought about by using a combined size of nozzle representing two or more individual nozzles. Thus in the problem you cite, two 1-inch nozzles are considered as equivalent to a single 1⅜-inch nozzle. This is not actually the case.

Two 1-inch nozzles are equivalent to a nozzle of 1.414 inches in diameter. Thus when we use the value of "K" for a 1⅜-inch nozzle, we are not employing the correct "K" value for the actual size of the combined nozzle.

If we were to solve for the value of "K" for a nozzle 1.414 inches in diameter, we would find it would be in the neighborhood of .4.

Using this value of "K" in the problem to which you refer, nozzle pressure

= 250 ÷ (1.1 + .4 × 24.56)
= 250 ÷ 1.924
= 22.8 pounds

The flow from each of the 1-inch nozzles at 22.8 pounds would be materially less than the flow from the same nozzles at 26 pounds pressure, as you will probably appreciate.

But the shorter method, employing the table values of "K" and the values for combined nozzles is employed because the error made is not serious when it is remembered that friction loss in fire hose may vary as much as fifty per cent.

In working out problems involving a

FIRE and POLICE
UNIFORMS

SHIRTS
BADGES
CAPS
INSIGNIA
ALL UNION MADE

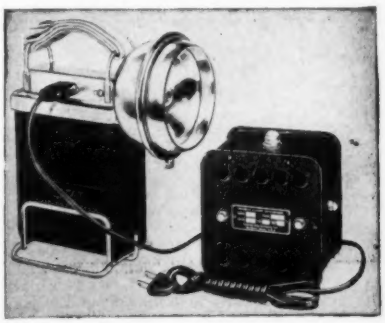
Read what this pleased customer says:

"We have received all our uniforms and badges and believe me we are all pleased — fine fit and fine uniforms." (John A. Johnson, Treasurer, Golden Valley Fire Dept., Minneapolis, Minn.)

WRITE FOR
FIRE CATALOG G-62
or
POLICE CATALOG G-63

RUSSELL UNIFORM CO.
192 Lexington, New York 16, N. Y.
Corner 32nd Street • Phone MU 6-0828

WHEAT *FIREMAN'S* SPOTLIGHT
Gives 10 Times More Light
PAYS FOR ITSELF IN 3 MONTHS
By Eliminating Dry Batteries



½ MILE BEAM
25,000 CANDLE POWER
1,500 HOURS OPERATION
Based on Regular Daily Use

Wheat Spotlight Saves first	3 months		$2.78
" " "	Next	6 months	70.80
" " "	Next	12 months	128.40
" " "	Next	24 months	256.10

For information how EACH WHEAT SPOTLIGHT can save you up to 40 cents per day:
Consult your Dealer or write

KOEHLER MFG. COMPANY
MARLBORO, MASS., U. S. A.
When ordering request new
WHEAT CHARGE INDICATOR

PacKo EMERGENCY CUTTING EQUIPMENT

LIGHT WEIGHT . . . EASY TO WEAR. ABSOLUTELY SAFE AND RELIABLE.

PACKO Emergency Cutting Equipment will be found invaluable. It will enable you to cut away steel barriers in a few minutes . . . enable you to get to the source of a fire quickly . . . enable you to make a rescue . . . that by any other method would require hours.

The unit is self-contained . . . complete with pressure proved cylinders, regulators, hose and non-backfire cutting torch. Order a set today. Carried by leading fire departments in the country.

The WELDERS SERVICE CO., Inc.
1519 PENN AVE., PITTSBURGH 22, PA.

Janesville

JANESVILLE QUALITY TURN OUT CLOTHING

Our turnout suits are giving excellent satisfaction in most of the large fire departments throughout the U. S. and

THERE MUST BE A REASON WHY SO MANY FIREMEN INSIST ON JANESVILLE QUALITY

Janesville APPAREL CO.

layout similar to the one described in this problem, if you want to get fairly accurate results, it is best to find the exact size of nozzle equal to the two or more nozzles on the branched lines and then solve for the value of "K" for this particular size nozzle.

To find the diameter of a nozzle equal to two given nozzles, square the diameter of each of the given nozzles, and then extract the square root of the sum of these squares.

For example, to find the single nozzle equal in area to two 1-inch nozzles, we square each of the 1-inch nozzles and then add the squares:

$1 \times 1 = 1$
$1 + 1 = 2$

The square root of 2 is equal to 1.414.

To find the value of "K" for such diameter of nozzle on 2½-inch hose, multiply the diameter of the nozzle by itself three times (that is, $D \times D \times D \times D$) and divide the product so found by 10. The answer will be the value of "K" for the given nozzle on a line of 2½-inch hose.

If the combined nozzle is 1.414 inches diameter, "K" will be $1.414 \times 1.414 \times 1.414 \times 1.414 \div 10 = .4$.

Friction in Parallel Lines

To the Editor:

In the July, 1951, issue, Page 505, you have solved a problem concerning two and three lines siamesed to a ladder pipe. In solving for friction loss you have used a single stretch of 500 feet at 355 GPM or 29.3 pounds per 100 feet in the first layout (two lines) and a single stretch of 500 feet at 253 CPM or 16 pounds per 100 feet in the second layout (three lines).

I can understand the solution up to the point of dividing the gallons per minute into two parts (first layout) and three parts (second layout) but I am puzzled as to why you solve for a single stretch instead of two and three respectively, i. e., why you use 500 feet instead of 1000 and 1500?

H. E. K.

Answer: The problem does not make it clear that the two and three stretches of hose are parallel lines, each 500 feet long. The purpose of the problem was to show the advantage of running three lines instead of two parallel lines from the pumper to the siamese. That is why the friction loss in each line from the pumper to the siamese is alike—when two lines are used and when three lines are used. For example, when two parallel lines are employed between the pump and the siamese, the friction in each is 146.5 pounds.

When three parallel lines are used between the pumper and the siamese, the friction loss in each will be 80 pounds.

Match Flame Dispels Odors?

It is reported scientists at the Illinois Institute of Technology have finally been able to prove something that millions of housewives reportedly have known all along: the flame from a common wood match will eliminate unpleasant household odors.

Insist On Wentworth "HEAD-MASTER"

Over 500 Stores, Uniform Manufacturers, and Fire Equipment Dealers in the United States and it's Territories, handle the "Head-Master" line of Uniform Caps. If your uniform dealer does not have "Head-Master" Uniform Caps, TELL him to write to us for complete information.

WRITE FOR CAP CIRCULAR TODAY

NEW UNIFORM CAP CIRCULAR SHOWS OVER 25 DIFFERENT STYLES. . .

Made ONLY By
WENTWORTH - FORMAN CO., Inc.
21 EDINBORO ST BOSTON, MASSACHUSETTS
Established 1895

SPECIAL BINDERS AVAILABLE

Every issue has something in it that you want to keep for future reference. If you have one of our standard handy binders, you will have every article at your fingertips and a complete yearly index of everything we have published. The binder holds 24 issues and two yearly indexes.

Price $2.50

CASE-SHEPPERD-MANN PUBLISHING CORPORATION
24 West 40 St., New York 18, N. Y.

ALL-OUT - ALL-OUT - ALL-OUT - ALL-OUT

Factory Mutuals' and Underwriters' Laboratories' approved

DRY CHEMICAL EXTINGUISHERS

• • •

Immediate Delivery
Dealer Territories Available

• • •

ALL-OUT EXTINGUISHER COMPANY

KEYPORT, N. J.

ALL-OUT - ALL-OUT - ALL-OUT - ALL-OUT

The Fireman's Choice

Powerful Light
When he needs it—where he needs it
Big Beam
PORTABLE ELECTRIC HAND LAMPS

Model 700
2000-foot beam

Most powerful, heavy-duty hand lamp of its size. Adjustable 6-inch head. Operates on four standard No. 6 dry cells.

Model 211
1500-foot beam

Popular price, light weight, easy to carry. Adjustable 5-inch head. Operated on two standard lantern batteries.

Write for folder on complete information on these and other Big Beam dry-cell and storage-battery models.

U-C LITE MANUFACTURING CO.
1041 West Hubbard Street
Chicago 22, Illinois

Among the Buffs

By Paul C. Ditzel

After a brief flurry of alarms and registers spinning out a pair of four-baggers within a couple hours on a recent evening and surrounded by a pair of 2-11 alarms, the local fans have gone back to watchful anticipation.

The first 4-11 started in an office furniture factory. The company formerly was in the 320 North LaSalle street building which was the scene of a recent 5-11 and three special alarm blaze in which four firemen were killed. Cause of the fire was not immediately determined and Fire Attorney Earl Downes said he planned an investigation.

Several hours after the office furniture factory fire, southside firemen pulled four alarms in rapid succession for a ripe one in a South State street house trailer factory. The long one-story brick building was really rolling and the local lads skipped a third alarm and jumped it from a 2-11 to a 4-11. They made a beautiful stop and prevented serious damage to a church on one side and a junk yard on the other.

I was state wire editor when the two multiples banged in and had to watch out our eighth floor window as apparatus rolled and other companies passed by soon after on automatic change of quarters. When quitting time came, Fire Fans Al Winograd and Les Morris picked me up and we went to the South State street fire which was still going.

Among the buffs at the fire was Chief Jim Rzonca of the non-existent 29th battalion. Jim's quarters are at 5159 South Wood street and according to Jim's running cards, he was first in on the 2-11 alarm.

Jim's quarters, known to local fans as "Jim's Fire Barn," is a popular fan hangout. Chief Rzonca is in charge of the shutoff gate on the beer tap. His familiar customers rate a special signature which Jim taps out on a mock fire department telegraph key as they enter the pub. When the fans leave Jim taps them "out of service."

Murals behind the watch desk-bar consist of an old steamer and a modern pumper. In the center is a color photograph of a 5-11 alarm blaze in the stockyards. Firemania is liberally sprinkled about the shop, including a large scrapbook with pictures of recent and historic Chicago fires. He also has helmets, nozzles, spanners. There's even a brass pole.

Jim's Fire Barn is down the street from a fire rescue squad and an engine company. Jim says the Squad was running a couple men short one day when an alarm came in from the stockyards area. The Squad pulled up in front and Jim dashed out. He keeps his firecoat, helmet and bunkers behind the bar. Fire alarms are received at Jim's from a police radio.

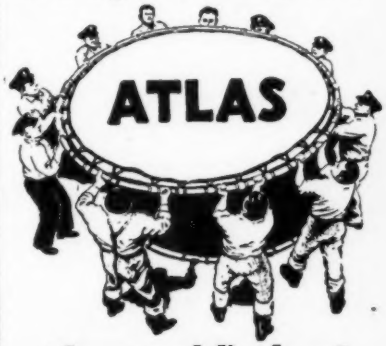
Fire Oddity of the Month: Resourceful Lt. P. "Cush" Cushing Jr., of the New York Fire Bell Club, was not at a loss when a multiple alarm tapped in when his submarine was at

BADGES

Quality
Service
Satisfaction

EVERSON-ROSS
85 CHAMBERS ST NEW YORK 7, N. Y.

always SPECIFY



the world's best
LIFE NET

in use in thousands of departments—time tried and proven—as the best and fastest means of rescue. All drop-forged hinges, with spring recoil mechanism like that on modern artillery. Specify ATLAS LIFE NETS on all new apparatus!

ATLAS SAFETY EQUIPMENT CO., INC.
27 WARREN ST., NEW YORK 7, N. Y.

New London, Conn. Cush was duty officer aboard the sub so he raised the periscope to watch a pier fire. Cush says he's the only fan to buff through a periscope and says he "took it all in by raising the scope so I could see over the adjoining ships."

Cush, along with other buffs, calls attention to Robert V. Masters' book "Going to Blazes." I saw the book after it was published and believe it is about the finest book, both for pictures and text, I've seen on fires and firemania. The September, 1950, issue of "Good Housekeeping Magazine," carried an article by Helen Markel on "They Love to Go to Blazes." Inasmuch as good housekeeping—actual or literary-wise—is unknown to this writer, I missed the article.

Speaking of the distaff side, have you heard of any girl fire fans or do they call themselves firebelles? "Going to Blazes" says Mrs. Harry Truman is a firebelle.

I broke in a new firebelle the other night.

Was driving the future warden home when a "still and box alarm" was broadcast from an address on Milwaukee Ave. The fire was nearby, so off we went. We pulled in before the box alarm companies arrived and the division marshal pulled the 2-11 alarm when he pulled up. The fire was in a taxpayer type shoe store and threatening to spread to an adjacent womens' apparel store. While said future warden was a little squeamish about the smoke rolling out the front of the place, she'll get used to that in time—I hope!

A recent New York Fire Bell Club News reports Phil Rizzuto of the New York Yankees visited club headquarters in the Martinique hotel in Manhattan. Incidentally, a Kansas City correspondent says a friend of his was greeted with blank stares when he asked a man that he thought was a New York official where the New York Fire Bell Club was. The New York visitor said the officer said he never heard of the club and didn't know what a fire fan was. For information of other buffs the famous Fire Bell Club of New York, Inc., is in the Hotel Martinique, Broadway and 32nd street, New York 1, N.Y. When I visited the club a year I was given a cordial reception by members. The same reception was given local fans who also were impressed by the Club's hospitality. So far, Cush is the only Bell Clubber to write. I'm sure other readers would like to hear about Bell Club activities.

Editor Don Shelburne of "The National Fire Register," writes enthusiastically of future plans for his infant magazine. I've received several copies of The Register and it improves with each issue. Subscription price is $1.50 for 12 issues and the magazine is easily worth it. Write Don at 7614½ Seville avenue, Huntington Park, California.

Don's ace Chicago stringer, Stanley E. Helberg, telephoned me on a recent Sunday to tip me off to a fire show in suburban Morton Grove. Stan and I attended the show and saw Evanston, Illinois' new 85 foot Pirsch aerial ladder. The truck had been accepted only

Rate $8 per inch less 10% for three or more consecutive insertions.

Classified Advertisements

Closing date for copy 25th of month preceding date of issue.

MANUFACTURER'S REPRESENTATIVES

One of the largest manufacturers of top quality fire hose desires aggressive and dependable regional sales representatives. Absolute territorial protection. Prompt deliveries. Factory co-operation. Box 255, FIRE ENGINEERING, 24 W. 40th St., New York 18, N. Y.

FOR SALE

AMBULANCES

1951 Superior—Cadillac
1950 Superior—Cadillac
1948 Superior—Chrysler
1948 Flxible—Buick
1947 Miller—Cadillac
1947 Meteor—Cadillac
1946 Flxible—Buick
1941 Meteor—Cadillac

All above units fully equipped and in excellent condition and guaranteed.

SUPERIOR CADILLAC DISTRIBUTOR
WOLFINGTON BODY CO., INC.
33rd & Arch Sts.
Philadelphia 4, Pa.
BAring 2-5252

Parts and Service
8301 Lansdowne Ave.
Phone: TRinity 7-2336

FOR SALE

SURPLUS

1½" DJ CRL fire hose, unused, but soiled—$.75 per ft., cpld.
2½" DJ CRL fire hose, unused, but soiled—$.95 per ft., cpld.
1½" SJ CRL fire hose, unused, but soiled—$.35 per ft., cpld.
2½" SJ CRL fire hose, unused, but soiled—$.65 per ft., cpld.

UNUSED & CLEAN FACTORY PACKED

1½" DJ CRL fire hose—$.80 per ft.
Couplings—$6.75 per set, attached
1½" SJ CRL fire hose—$.42 per ft.
Couplings—$4.50 per set, attached
2" DJ CRL fire hose—$1.06 per ft.
Couplings—$9.25 per set, attached
2" SJ CRL fire hose—$.56 per ft.
Couplings—$6.75 per set, attached
2½" DJ CRL fire hose—$1.29 per ft.
Couplings—$9.75 per set, attached
2½" SJ CRL fire hose—$.71 per ft.
Couplings—$7.50 per set, attached

ALL HOSE IN 50' LGTHS.
Delivery—from stock

TOWSON HOSE & RUBBER CO.
104 West Joppa Road
Baltimore 4, Maryland

FOR SALE
TRAINING LADDERS

ROEVER TRAINING LADDER brings the aerial to the classroom. Designed to illustrate "reach", and angle required as aerial is placed various distances from building (see page 365, May issue). Twenty-seven inches high. Write to:

CHARLES R. ROEVER
291 Washington Street
Hempstead, New York

FOR SALE

FIRE APPARATUS

1928 Mack International 1,000 Gallon Pumper, Type 15, Model APDR, 6 Cyl. Hose capacity 1,200 Ft. Rotary Gear Pump.

Motor and Truck in good condition. The above truck is available for immediate delivery. Anyone interested may procure further detailed information from:

FLOWER HILL HOSE CO. NO. 1
Port Washington, L. I.
New York

FOR SALE

1937 Dodge with special built open body equipped to carry special emergency equipment and first aid supplies in compartments. Closed cab heater, fog lights, siren, mounts for portable light outfit, seats 10 men, mounted on 1½ ton chassis, actual mileage 6,454. Inspect any time, any reasonable offer considered. Address:

WASHINGTON FIRE DEPARTMENT-
EMERGENCY SQUAD
Washington, New Jersey

FOR SALE
DEMONSTRATOR

Smithco Firefighter 2,000-gal. tank truck, with Hale F32 pump, light plant, floodlights, complete with aluminum ladders, pike poles, 2" suction hose, 300 ft. 1¼" D.J. hose, 250 ft. ¾" booster hose, and other equipment. For details write:

L. B. SMITH, INC.
Camp Hill (Suburb Harrisburg)
Pennsylvania

FOR SALE

1936 Diamond T Chassis, Barton Front Mounted Pump, two years old. 150 gallon booster tank Standard Equipment, excellent condition.

TRAUTWEIN'S, INC.
Woodbridge, N. J.

FOR SALE

American-LaFrance 500 gallon Pumper with 90 gallon Booster tank (500 gallon Pump new). In good operating condition ready to answer alarms. Write:

WESTBURY WATER DISTRICT
Westbury, New York

DEALERS WANTED
GOLD STRIPE KIT

Kit enables any fire dept. member with little art skill to touch up damaged gold stripes and letters with genuine gold leaf. Gold paint never matches. Do it easily and correctly with ROEVER STRIPE KIT. Retail price $3 post paid.

CHARLES R. ROEVER
291 Washington Street
Hempstead, New York

We shall appreciate your mentioning FIRE ENGINEERING *when writing advertisers*

CIRCUL-AIR
THE AIR-CONDITIONING
FIRE HOSE DRYER

Patented

Circul-Air is the patented, electrically operated hose dryer which circulates prewarmed fresh air through coiled wet hose at the rate of 5 to 6 air changes per minute. It's designed to lengthen hose life, improve the appearance and functional design of new fire houses, and to save floor space and hard work. No other drying method is so fast—so economical—so easy to use.

WRITE FOR CATALOG TODAY

THE CIRCUL-AIR CORPORATION
575 East Milwaukee Detroit 2, Michigan

What a line!
We're referring to the U. S. Electric Plant line, of course—over 300 models to choose from! "U. S." builds units from ½ to 150 kw, AC and DC. Backed by 60 years of manufacturing experience.
Write for literature.
United States Motors Corp.
430 Nebraska St.
Dept. B
Oshkosh, Wis.
U.S
UNITED STATES MOTORS CORPORATION
OSHKOSH, WISCONSIN

the day before and is part of Evanston's ambitious program of fire department modernization.

A recent Rotarian Magazine tells of a clambake of Reading, Massachusetts, Rotarians. Rotarian Fire Chief Hugh Eames put an old horse-drawn steamer to work. The engine was fired up and a hose led from it to a metal barrel full of clams and a barrel full of lobsters. "It steamed them perfectly," writes Rotarian Charles E. Wilkinson.

Until next month's clambake in FIRE ENGINEERING columns, please continue sending your fire buffing anecdotes. My quarters remain at 859 Wellington avenue, Chicago 14, Ill., and if you're in Mrs. O'Leary's town ring me in (as Smokestack Hardy would say) at Eastgate 7-5796. If I'm not there you might try The Associated Press 160 North LaSalle St., Phone, State 2-7700. Good buffing.

Pacific Coast Chiefs Meet at Portland

A high point in the annual convention of the Pacific Coast and Inter-Mountain Association of Fire Chiefs, held in Portland, Oregon, on August 7-10, was the display of marine fire fighting power by Portland fireboats "David Campbell" and "Karl Gunster" on the Willamette River just off shore from the city's new central fire station.

The two boats, using 5-inch nozzles in one demonstration, threw streams nearly across the river. In other demonstrations, using three main nozzles and six side or rail pipes, each discharged approximately 10,000 G.P.M., and as a finale, each vessel sent streams of colored water through its forward nozzle, the colors changing from brilliant pink, to red, green, purple and other shades.

In a demonstration of relay operations, water from the river was sent through more than 3,000 feet of hose to emerge at high pressure from the terminal nozzles. Boats shot water into the main line at 200 PSI; a 1,000 G.P.M. pumper, 1200 feet distant, picked up the load and relayed it to two more pumpers, stationed at 500 foot intervals in the line. The final pumper, at 300 feet, discharged water through four nozzles.

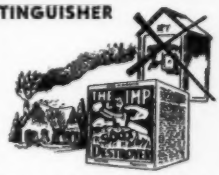
Howard Gill, Drillmaster, was in charge of the demonstration with Captain Leo Weidner as master of ceremonies.

Approximately 650 fire chiefs, fire officials and their wives from Oregon, Washington, California and Rocky Mountain States attended the sessions of the conference which opened Aug. 7. Mayor Dorothy McCullough Lee welcomed the delegates to Portland; Chief William Fitzgerald of Seattle acknowledged the welcome for the Association.

A solemn memorial service honored Portland firemen who have died in the past two years. On Wednesday, second day of the conference, there were talks by Chief John Alderson, Los Angeles; Chief Ivan L. Pearson, McMinnville; Dr. Albert W. Bellamy, chief of radiological services for the California CD council; Jack Hayes, director of the Oregon C.D. agency and Dr. John Gerletti Jr., assistant professor, school of government, University of Southern California. Sessions were held in the fire headquarters auditorium.

The annual business meeting was held on Thursday, followed by the banquet at the Multnomah Hotel.

Chief---
CAN YOU PUT OUT A CHIMNEY FIRE for 60¢?
—YOU CAN WITH IMP
CHIMNEY FIRE EXTINGUISHER



Save rushing to chimney fires—avoid slippery roofs by using IMP Chimney Fire Extinguisher. Just throw a 60c package "as is" on the hottest part of the fire in the stove, furnace or fireplace. The chimney fire will be out in jigtime without water or chemical damage. Recommended by many chiefs who carry IMP in their cars. ALSO—LIQUID IMP for *oil fired units*, is as much a fire preventative as pkg. IMP. Saves oil, money, increases heat, prevents sludge, reduces carbon deposits and is safe. You know what a fire hazard sludge is. Use LIQUID IMP in your own burners. 3¼ oz. enough for 90 gals. kerosene or 55 gals. No. 2 fuel oil; 16 oz. enough for 5 times above quantity; 1 gal. enough for 1600 gals. #2 fuel.

USE THIS COUPON FOR YOUR ORDER

F. C. FOARD & CO., Box 481, Bridgeport 1, Conn.
Please send.....doz. package of IMP @ $7.80 per doz.
and/or.....doz. 3½ oz. Liquid IMP @ $9.00 per doz.
.....doz. pint Liquid IMP @ $27.00 per doz.
.....quarts Liquid IMP @ $4.40 per qt.
.....gallons Liquid IMP @ $14.00 per gal.
I will honor your bill f.o.b. Bridgeport.
NAME .....
ADDRESS .....
CITY..... STATE.....

FIRE EQUIPMENT DISTRIBUTORS ATTENTION!
Add package and Liquid IMP to your line.
Write TODAY for special distributor Plan.

TWICE THE STRENGTH... *half the weight!*

Elkhart's X-TRUDE

HOSE COUPLING

Plate X-329

MADE OF BRASS ALLOY
NON-CORROSIVE

Here is the real practical answer to the Fire Chief's challenge for lighter weight with greater strength. The metal used in Elkhart's X-TRUDE coupling is a special non-corrosive Brass alloy. Processed by extrusion, instead of casting, gives more strength and insures greater accuracy in machining. *Elkhart's X-TRUDE coupling—as light as aluminum—but made of brass . . . half the weight and twice the strength of brass couplings in service today.*

Available in 2½" (three lug type) and 1½" (two lug type) Double Jacket Fire Hose Sizes.

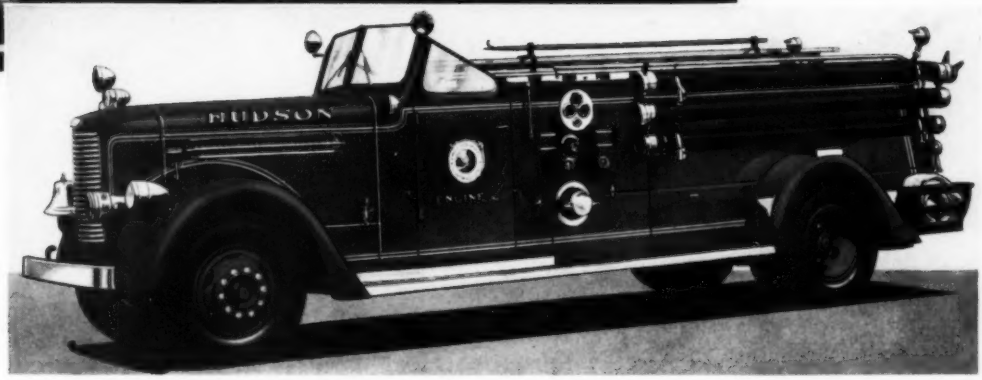
Write for Descriptive Literature.

ELKHART BRASS MFG. CO., INC.
ELKHART, INDIANA

ADVERTISING INDEX

FIRE ENGINEERING
OCTOBER, 1951

	Page
Acme Protection Equipment Co.	866
Akron Brass Mfg. Co., Inc.	808
All-Out Extinguisher Co.	873
American-LaFrance-Foamite Corp.	807
American-Marsh Pumps, Inc.	867
American Rubber Mfg. Co.	819
Ansul Chemical Co., Fire Extinguisher Div.	841
Approved Fire Equipment Co.	858
Arguslite Company	863
Atlas Safety Equipment Co., Inc.	873
Attwood Brass Works, Inc.	865
Bar-Way Mfg. Co.	870
Bean Div., John; Food Machinery and Chemical Corp.	802
Blackinton & Co., V. H.	844
Body Guard Mfg. Co.	870
Boston Woven Hose & Rubber Co.	814
Braxmar Co., C. G.	846
Brumbaugh Body Co.	862
Buckeye Iron & Brass Works	857
Bullard Co., E. D.	854
Cairns & Brother	862
Calgon, Inc.	869
Carbide & Carbon Chemicals Div., Union Carbide & Carbon Corp.	853
Carpenter Manufacturing Co.	868
Central Fire Truck Corp.	857
Circul-Air Corp.	875
Darley & Co., W. S.	861
Duo Safety Ladder Corp.	816
E & J Manufacturing Co.	817
Elkhart Brass Mfg. Co., Inc.	876
Emerson Co., J. H.	Inside Front Cover
Eureka Fire Hose Div., U. S. Rubber Co.	839
Everson-Ross, Inc.	873
Fabric Fire Hose Co.	799
Fairbanks, Morse & Co.	870
Federal Enterprises, Inc., Signal Div.	797
Fenwal, Inc.	806
Firewater Company, The	864
Foard & Co., F. C.	875
Four Wheel Drive Auto Co.	Back Cover
Fyr-Fyter Co.	803
Gamewell Co.	820
Gerstenslager Company	860
Goodrich Co., B. F.	801
Hale Fire Pump Co.	848; 868
Halligan Tool Co.	855
Harrington Signal Co.	871
Homelite Corp.	845
Howe Fire Apparatus Co.	852
Janesville Apparel Co.	872
Kidde & Co., Inc., Walter	847
Koehler Mfg. Co., Inc.	871
Kohler Company	861
McIntire Brass Works, F. N.	870
Mars Signal Light Co.	800
Maxim Motor Company	818
Memco Aerial Ladder	871
Midwestern Mfg. Co.	812
Mine Safety Appliance Co.	805
Morning Pride Mfg. Co.	866
Motorola, Inc.	843
National Foam System, Inc.	856
Oberdorfer Foundries, Inc.	859
Onan & Sons, D. W.	866
Oren-Roanoke Corp.	869
Pacific Marine Supply Co.	865
Pirsch & Sons Co., Peter	Inside Back Cover
Portable Light Co., Inc., The	875
Powhatan Brass & Iron Works	855
Pyrene Mfg. Co.	849
Radio Apparatus Corp.	863
Republic Rubber Div., Lee Rubber & Tire Corp.	804
Rockwood Sprinkler Co.	811
Russell Uniform Co.	871
Scott Aviation Corp.	842
Seagrave Corp., The	815
Smith & Co., D. B.	813
Solvoid Div., American Marine Paint Co.	850
Stephenson Corp.	852
Sterling Siren Fire Alarm Co., Inc.	867
U-C Lite Mfg. Co.	873
Union Carbide & Carbon Corp., Carbide & Carbon Chemicals Div.	853
U. S. Motors Co.	875
Ward LaFrance Truck Corp.	809
Waterous Company	851
Waukesha Motor Co.	810
Welders Service Co.	872
Wentworth-Forman Co., Inc.	872
Wooster Brass Co., The	859



DESIGNED FOR FIRE SERVICE

Pirsch fire engine chassis are designed and built by experienced fire engine manufacturers for fire service only, and provide the performance required to handle today's fire fighting problems.

1000 Gallon Pirsch Triple Combination pumping engine shown above has been delivered to town of Hudson, Mass.

PETER PIRSCH & SONS CO. KENOSHA, WIS.

"BUILDERS OF AMERICA'S FIRST ALL-POWERED AERIAL LADDER TRUCK AND AMERICA'S FIRST 100' AERIAL LADDER"

Alexandria, Minn. Chooses

Alexandria, Minnesota chooses FWD because of the added safety and protection it offers. Alexandria's new FWD Model F75-T is equipped with 400 gal. booster tank, two booster hose reels with 150' x ¾" hose. Hose body holds 1000' of 2½" hose and 1000' of 1½" hose plus two 10' x 4½" and four 10' x 2½" hard suction hose sections. Pump is FWD 2-stage centrifugal, 750 gpm series-parallel.

Choose the Added Protection of Extra-Traction to Protect Your Community

Traffic experts know that FWD four-wheel-drive traction means less time on the run *and far less danger for crews, equipment and other vehicles.* Equally important—FWD engineering also delivers extra action and dependability at the blaze. Write for full facts on this exclusive combination of advantages.

This is Why You Need FWD *EXTRA-TRACTION*

AVOID HAZARDS ON THE STRAIGHT-AWAY

Start faster. Positive control permits greater speed. Avoid collisions because 4-wheel-drive assures superior steering.

REACH OUT-OF-THE-WAY HYDRANTS

Get through to water supply in hard-to-reach sections. Drive over terrain that stops the conventional fire truck.

FULL CONTROL ON SNOW OR ICE

With front wheels pulling and back wheels pushing —drive swiftly, safely over icy or snow-blocked streets and roads.

STEEP GRADES, MUD, SAND NO OBSTACLE

Drive hub deep through sand or mud. Pull up steep, slippery grades without losing speed. Save precious minutes.

Built by the Makers of America's Foremost Heavy-Duty Trucks

THE FOUR WHEEL DRIVE AUTO CO., CLINTONVILLE, WIS., *Canadian Factory:* KITCHENER, ONT.